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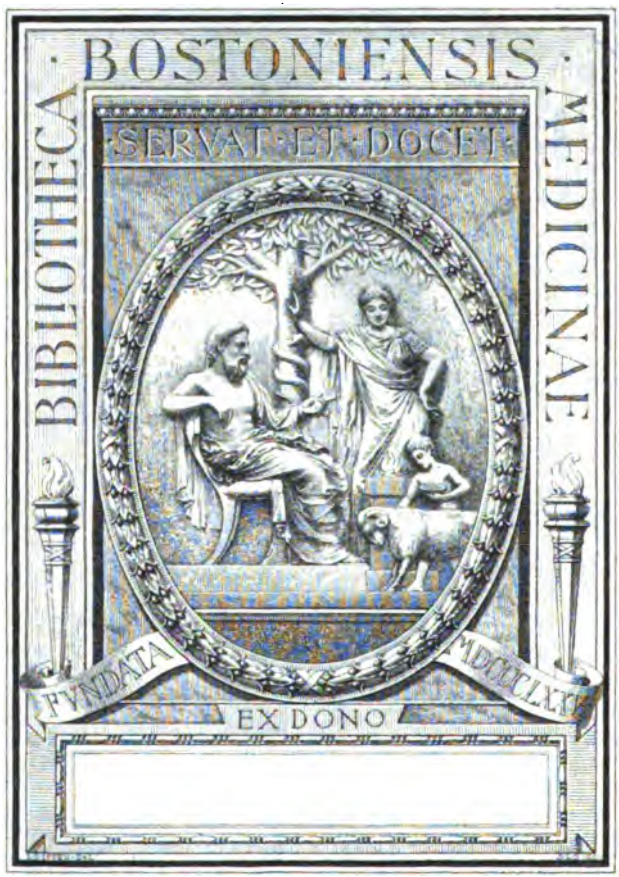
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THE

West London Medical Journal.

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Original Communications.

SOME CONSIDERATION OF THE LIFE AND WORK OF THE GENERAL PRACTITIONER.[1]

By S. D. Clippingdale, M.D., F.R.C.S.

Honorary Medical Officer to the Kensington Dispensary.

It is the custom for the President of our Society to select as the subject of his inaugural address the matter with which he is most conversant, in other words, his *Speciality*. The speciality of a general practitioner is, or should be, general practice, and it is upon this subject that I, a general practitioner, wish to offer you a few remarks this evening. I am aware that I am addressing many who, from seniority or experience, know more of this matter than myself. From them I ask forbearance if I show ignorance, while from every member I beg indulgence if my remarks lack interest.

The life and work of a general practitioner can, I think, best be studied under three heads: (1) The doctor's duty to his patients and to the public; (2) his duty to other doctors, and (3) his duty to himself.

[1] The Presidential Address delivered at the opening meeting of the Session, October 8, 1898.

The Duty of the Doctor to his Patients and to the Public.

The duty which a medical man owes to the community generally cannot, I think, be over-rated. The late Mr. Gladstone expressed his belief that doctors would eventually become the leaders of the people. Whether or not this will be so, I think there can be no doubt that the influence of the medical man is increasing. The reason of this trust is, I think, due to three causes: the doctor is known to found his opinions upon scientific facts, that is, he is a disciple of Truth; he is known to possess a keen insight into human nature; and he is, I hope, always regarded as a man of honour.

The evolution of the doctor, the process by which he has reached his present stage of development, is itself an interesting study.

As you are aware, the earliest practisers of the art were alchemists and astrologers. Then came the Church, and to its guardianship there is no doubt medicine owes much, for the clergy brought science and logic to bear upon the cure of disease. The priests were the only educated men at the time, and medicine was elevated by their dealing with it. Many of the clergy made a special study of disease, and one of the Popes, I think John IV., was what would be called to-day a qualified practitioner. After a time, as medical science widened and deepened, it became necessary that a separate body of men should be trained to deal with it. Theology and medicine were divorced—not, however, without a struggle. The new order of practitioners, like all innovators, were looked upon with suspicion. The Pope and his cardinals discussed the question whether, in the interests of the human race, the new order should be encouraged or suppressed. The cardinals, with a natural anxiety for the welfare of their people, were unanimously in favour of suppression. The Pope, so it is said, was of the opposite opinion, on the ground that the new doctors, if allowed a free hand, would be sure to kill some of their patients and so prevent over-population of the world. As a strong contrast to this the Bishop of Augsburg, a few weeks ago (as related in the *British Medical Journal* of September 24), found it necessary to issue an edict against what he terms "the illegal

practice of medicine by clergymen," and exhorts the priests to keep faith with regular practitioners.

For centuries after its emancipation from the Church, medicine was little better than quackery; in fact, it is doubtful whether the term "science" can be applied to anything which existed, certainly in this country, before the time of Harvey.

The estimate formed of the doctors at various times may be ascertained by consulting the contemporary literature. Thus, Chaucer in his "Canterbury Tales" describes a doctor, and seems to think him above the average, and attributes the superiority to his trusting not so much to theology as to what he calls "natural magic." The doctors of Shakespeare's time must have had an evil reputation, if we are to judge of them by the poet's writings, for in these they are generally the agents by which death is produced. In the "Anatomy of Melancholy," Burton, writing in 1621, speaks thus of the profession: "I would require honesty in every physician, that he be not over-careless or covetous, harpy-like to make a prey of his patient, or as an hungry chirurgeon, often produce and wire-draw his cure, so long as there is any hope of pay. Many of them, to get a fee, will give physic to every one that comes when there is no cause, thus, as it often falleth out, stirring up a silent disease and making a strong body weak." A century later we find Molière writing in a venomous way about doctors, in a way, in fact, to lead one to suppose that he had some personal reason for the attack. Le Sage, in "Gil Blas," writes in a similar strain.

The contemptuous attitude shown to the profession was perhaps more or less deserved, and was probably due to three causes. In the first place, the doctor was little better than a charlatan, using all sorts of filthy compounds with which to treat his patient. To him the saying may be aptly applied, that he "put drugs of which he knew little into a body of which he knew less." If his remedies failed, a further piece of chicanery awaited the unfortunate patient, for the doctor sought a consultation with a physician, not at the patient's bedside, but in a tavern or at a street corner, and the physician would there, for a fee, prescribe for a patient he had never seen!

A second cause of want of esteem was possibly the fact that the surgeon often played the *rôle* of personal servant. Henry VIII., for instance, was washed by his doctor, and the doctor has left an amusing account telling us that his royal master would only take a bath once a fortnight, and then if he were in a temper, would only have his feet washed.

A third probable cause for the disrespect was the mercenary disposition which unfortunately but undoubtedly characterised many of the profession. This I have mentioned above, and it is referred to in many books. On this matter the late Dr. James Andrew informed me that the doctors of London three hundred years ago had been credited with bribing the Lord Mayor to give parties in March!

It is not until the beginning of last century that we find doctors referred to with anything like respect; and then the allusions become sympathetic. The poet Pope, for instance, says of his doctors: "There is no end of my kind treatment from the Faculty; they are in general the most amiable companions and the best friends, as well as the most learned men I know." Of Dr. Lettsom, the celebrated physician of the reign of George III., it is recorded that, "Generosity was the ruling feature of his life"; and Dryden writes, "That I have recovered, is owing, next to God's mercy, to the skill and care of Dr. Guibbons and Dr. Hobbs, two ornaments of the profession whom I can only pay by this acknowledgment."

A study of latter-day literature will show that the doctor is growing in public estimation. Dickens and Thackeray, it is true, write in satire of the profession; but satire is characteristic of these distinguished novelists. In the modern novel the doctor often receives an amount of adulation which is fulsome; but honest tribute is to be found in the writings of the American poet Whittier, the late Mr. John Timbs, Mr. Cordy Jaefferson, Mr. Symington, Mr. William Andrews, and many others, while sympathetic articles are constantly appearing in the journals, notably the kindly and graceful writings in the *Spectator* last year.

With his position in public favour firmly established, and with the look for guidance from his fellow men, how is the doctor to discharge his trust? and first:

What part should a Medical Man take in Municipal or Imperial Government?

I have never felt free to respond to invitations to go upon a Local Board. It has always seemed to me that the contentions which often characterise the proceedings of these Boards is incompatible with the calm required for medical practice; and I am of opinion that the work of these Boards is best left to the excellent business men who generally compose them and to their responsible medical advisers.

With regard to the House of Commons, it should always be remembered that a medical man who becomes a member of Parliament does so as the representative of one or other of the political bodies. When he speaks he is listened to, not as a doctor but as the agent of the party he represents. The political doctor is in my mind as unsatisfactory as the political parson, and for a doctor to achieve success as a politician, appears to me to amount to a confession that he blundered in choosing his career.

Government wants guidance in matters of health, but should not they get this as they get guidance in matters of law? Corresponding to the Law Officers of the Crown, should there not be a Minister of Health? A medical man of great repute. The Minister of Health would of necessity be changed with a change of Government, but this would ensure the post being always filled by an up-to-date man. With a medical man as Minister of Health we should cease to witness the curious phenomenon of medical questions being answered by a gentleman who may perhaps be a successful brewer!

As to the representation of the profession itself in Parliament, I fail to see why it should not be represented where the other two professions are represented. I cannot believe that the House of Lords would suffer in dignity or in utility by the creation of a certain number of Life Peers on the nomination of bodies like the Royal Colleges of Physicians and Surgeons.

With regard to the public services, it is a satisfaction to note that the office of coroner is now frequently given to a medical man who has taken the trouble to graduate in law also; the first appointment of this sort in London being that of Mr. Luxmore Drew, the admirable coroner of this district.

As to the military services, voluntary or regular, we must rejoice that our comrades in arms have at last received the positions and titles which they justly deserve; but I think we should deprecate a disposition on the part of our military brothers, to forget that they enter the army as *doctors* or a desire to exchange the medical for the military spirit.

Doing this has been compared by Brigade-Surgeon Climo, and I think rightly compared, to the child, who, possessed of a priceless jewel, prefers the setting.

What Duty does a Doctor, as a Teacher of Hygiene, owe to those with whom he may come in Contact?

This duty is one of increased importance now that the Legislature has declared that a man may place his "conscience" above the law, especially as this so-called "conscience" seems to be the peculiar possession of ignorant people. It is also the duty, I conceive, of every medical man, to point out that the object of medicine is its own obliteration; that death should follow senile decay alone; and that the stamping out of disease is a possibility, though its realisation will be delayed by the misguided action of faddists and "antis."

In what way can the Doctor best discharge his Duty to his Patients?

It has been said that a good doctor will aim at becoming as efficient as possible and then see that his patients get the benefit of his knowledge.

I think it would be well if we asked ourselves occasionally such questions as these:—How often do I attend the meetings of the Medical Society? What part of my annual expenditure in books goes in the purchase of medical literature? Do I utilise my holidays in any way for the benefit of those who enable me to enioy them? With regard to the last of these questions, I may say that it has been my custom for some years to spend my holidays in health resorts. In this way I have had many pleasant trips, not only to the most picturesque parts of these islands, but also to such places as Arcachon and Biarritz, the health resorts of the Pyrenees, the Riviera, in Switzerland and in Germany, and

I have seldom failed to find the knowledge thus obtained of benefit to my patients. The late Dr. Wilson Fox, addressing his students, said, "When taking your holiday, if you are anywhere near a health resort by all means go and see it." I would venture to say "go to the health resort while engaged in active practice for your holiday, and if you are any where near a golf course, &c., go to it." The late Archbishop Trench, on this subject, wrote :—

> "They who bid stern duty lead
> Content to follow, they
> Of duty only taking heed
> Find pleasure by the way."

The doctor who, having seen a patient at a distance, with the knowlege that he has done good and been well paid, with half an hour before his return train starts, and, being of an antiquarian disposition, turns into the aisles of an ancient cathedral, derives infinitely more gratification than if he had made the journey in pursuit of pleasure. The late Sir Andrew Clark, at a dinner of this Society, made, as many of us will remember, some trenchant remarks about the man who prefers the theatre to the Medical Society, the novel to the Medical Journal, and having stated that he came as a matter of duty, but with a splitting headache, said that a man succeeded just as he was able to put his sensations under his foot and crush them. Gentlemen, if I speak something like a pedagogue, I pray you forgive me. I am sensitive on this matter, for I feel no one needs greater stimulation to work than myself.

Turning to the question :—*How can a medical man, having taken pains to make himself as proficient as possible, benefit his patients by the knowledge thus acquired ?* I would suggest that a man often fails through want of confidence in himself. The late Prince Bismarck, when asked why he selected as his medical adviser the youthful Dr. Schweninger when there were so many older and better known men in Berlin, replied, "The difference between Schweninger and my former doctors lies in this :—I treated them, Schweninger treats me." Sir Morell Mackenzie and Dr. Burney Yeo have both pointed out that the doctor should always be *superior* to his patient. The patient, in fact feels *weak* and seeks *support*. He is the *adjective* and needs the doctor as a *noun* to lean upon.

The Duty of the Doctor to other Doctors.

I wish to point out that the public have a curious notion as to what is called "professional etiquette." "You doctors are so funny," a patient will say, and he insinuates that "professional etiquette" is a variety of trades-unionism existing for the benefit of the doctors and to the detriment of their patients. It not easy to make him believe that "professional etiquette" is simply the practice of the Christian rule of doing to others as you would have others do to you. The peculiarity of the doctor, however, is that he carries this rule out more faithfully than others. The clergyman, for instance, does not expel from his congregation the person who lives in another parish, the lawyer does not refuse advice to a client who has consulted another lawyer, and the tradesman assuredly takes delight in getting his neighbour's customers.

To a young practitioner, however, who wants to pull well with his colleagues, I would strongly advise a perusal of Dr. de Styrap's excellent work on "Medical Ethics" and the report upon the same subject by the Shropshire Branch of the British Medical Association. A study of these works and a careful consideration for the feelings of others, would, I think, lessen the number of painful revelations we are accustomed to in the correspondence columns of the medical journals.

What Duty do we owe to our Brother Practitioners in the poorer parts of London?

We who live among cultured people, near Parks and Museums, who receive remunerative fees, and are shown hospitality by our patients are, I fear, but ill acquainted with the struggles of our equally deserving brethren, who practise exclusively among the poor. I am not certain whether we do not look upon them with something like contempt, and complain of the small fees which they, unfortunately, are obliged to accept. Yet surely the poor man's shilling is as respectable as the rich man's guinea, and the poor man's doctor is generally one of vast experience and often a man of culture. I am acquainted with the case of an old Eton boy who has to receive a smaller fee than a shilling.

To help these, our less fortunate brethren, is indeed a difficult problem, but I think a hint may be taken by what is known as the "affiliation" among the churches, that is, a scheme by which a rich parish helps a poor one. The idea as regards medical work is certainly, at present, impractical, and may be altogether impossible, yet I can conceive that upon recognised and equitable principles an interchange of practices would be possible and beneficial. The West End practitioner would be glad to realise the hardships of his less fortunate brother in the East; the East End man would find relief by a stay in the West. An outcry would be raised by some of our wealthy patients, but they would have to follow us into the East and bring their wealth with them.

What is our Duty in the Matter of Consultation?

I think it should be clearly laid down that one general practitioner should never meet another general practitioner in consultation—not for fear of arousing jealousy, but simply in the patient's interests. If two men practising on the same lines and receiving the same fees meet in consultation, they must either agree or disagree. If they disagree the patient is placed in the awkward or impossible position of deciding between them. If they agree the patient gains nothing. The entire body of consultants is within easy reach of us, and if the patient cannot afford the fee for the consultant's advice, he should seek that advice gratuitously at the hospital.

As to the consultants we call in, I fear there is a tendency to select our old teachers or our personal friends; and our old teachers and personal friends are rather apt to recommend us as private doctors, to the exclusion of perhaps better men. I think the interest of the patient alone should guide in such matters. The consultant we summon to our patient may not be the consultant we should select for ourselves or our families; but there may be many reasons in the interests of our patients to influence us, and the interests of our patients should, I think, be our sole guide.

A class of practitioners I cannot understand, includes the men who, while engaged in general practice, pose as specialists, and the consultants who engage in general

practice. In this neighbourhood, I fear it is not uncommon for a consultant to visit a patient alone. He does so in the first instance for a smaller fee than he would receive in consultation, and sometimes pays a second visit without fee. A "friendly visit" he calls it. In this way he enters very closely into competition with the general practitioner. Would it not be better for the practitioner of either kind to restrict himself solely to his proper work? The medical sphere is such a large one that it requires a man's entire energy to discharge properly his duty in the branch he has selected for his own work.

> "One science only can one genius fit
> So deep is human knowledge, so shallow human wit."

The Doctor's Duty to Himself.

If a doctor takes pains to make himself efficient, and lets the patient benefit by his efficiency, he is certainly entitled to look to the patient for adequate remuneration. And yet how often is he doomed to disappointment? The lines quoted in his presidential address by Dr. Alderson are too often too true:—

> "God and the doctor we alike adore
> When sickness comes, but not before,
> The danger over, both are alike requited,
> God is forgotten and the doctor slighted."

To secure prompt remuneration I think it would be better if we could follow the example of barristers, of consultants, of medical men in Ireland, and in some places abroad; that is, to secure our fee at the time of our attendance. "The sick man," some one has said, "pays willingly while his tears are wet." Our custom of keeping books and rendering accounts, while it savours of the custom of tradesmen, is often, I think, the cause of serious loss to our pockets.

In the Care of his Health.

I fear the general practitioner is too heavily handicapped by the nature of his work to take much heed. For instance, no conscientious practitioner can take an hour for a meal and rest in the middle of the day if the patient who sent early in the morning has not yet been seen. The lunch is postponed. The digestive organs, ready with their juices

to receive and digest the expected meal, think their agency is not required and resume a state of inactivity, from which they are rudely awakened one, two, or three hours afterwards. They are then called upon for extra work, get worn out early, and dyspepsia results. I think it better to take at the usual meal hour a mere *soupçon* of food, if there is not time for a proper meal, and then wait for the next regular meal hour for a fuller supply.

The disturbed sleep, the exposure to weather, the anxiety caused by difficult cases are all matters over which I fear a medical man has little control. No wonder the average years of his life are as low as fifty-seven. He must accept the pains as well as the pleasures of his profession, and can only look forward to retirement to be freed from the former and to dwell with satisfaction upon the latter.

In the Matter of Recreation.

I think that no doctor should be without his hobby. It has been said that a man who sticks sufficiently closely to his work finds in it his recreation as well as his means of living. The nature of the doctor's work, however, demands that his mind shall be abstracted at times from things morbid. The neglect of this demand is liable to be productive of misery when the time comes for cessation of active work. A celebrated physician complained to my friend in these terms: "I am told I must retire and make way for younger men. I have done nothing all my life but physic people, and now I am told to go into the country and grow cabbages." I grieve to know that this distinguished man's period of retirement is not as happy as it should be.

Lord Bolingbroke, the celebrated statesman of Queen Anne's reign, said, "Blessed is the man who has a hobby." And a well-known doctor has said, "If you cannot find pleasure in the study of geology, of natural history, or of astronomy, then by all means make a collection of old walking sticks, of postage stamps, or of pieces of cracked china."

Finally, I would advise a spirit of contentment as conducive to happiness in a doctor's lot. His work is surely a creditable one. The necessity of being able to deal effi-

ciently with disease in all its forms at all times, the ability to treat successfully persons of all ranks and of all tempers, surely compels the possession and the exercise of knowledge and tact which is not surpassed in energy and self denial by the requirements of any other branch of practice.

It is a pity for the doctor, having put his hand to the plough, to look back or to look above. I am sure many of our consulting brethren could tell us bitter tales of the struggle of their earlier years.

In general practice there is much, if we only look for it, to interest and instruct us; much to keep our sympathies green and our spirits contented. Mr. Fildes' picture, the picture which attracted so much attention a year or two ago, did not portray the Court Physician, whose name is in the paper every day, or the popular specialist who is the idol of society. The picture represented the general practitioner in the humble cottage, watching the sleeping child, and thinking what he will have to tell the parent, and watched himself by the anxious parent trying to forecast what he will have to hear from the doctor. The picture recalls the lines written upon a portrait of the late Mr. Merriman, of Kensington :—

> "What does it tell us? That to thee
> The noblest task on earth was given,
> The brightest service that we see
> Conferred on mortal under heaven.
> To heal the sick, to lighten pain,
> To gently cool the heated brow,
> And like an angel bring again
> Hope to the hopeless, such wert thou."

I have referred to the ingratitude of patients, but how often do we receive from them touching evidence of their esteem and affection? How many of us can display valued, if not always valuable, gifts? It is said that a doctor should have his coat made with two pockets, one for his fees the other for his insults. But is not a third pocket sometimes a necessary one to receive these welcome gifts?

There must surely be something in medical practice to awaken the emotions and stimulate the intellect, for we find the highest forms of literature enriched by the contributions of members of the medical profession. Witness the works of Goethe, Sir Thomas Brown, Goldsmith, Smollett, Sir

Samuel Garth, Sir Thomas Blackmore, Akenside, in the past, and, besides others, Oliver Wendell Holmes, Conan Doyle and John Watson in the present day. How many of us could write, founded upon our work, histories like the "Diary of a late Physician," by Samuel Warren, who was a doctor as well as a lawyer?

The family doctor is, perhaps, more than either the clergyman or the lawyer, the family friend. He is seen more frequently than either of the others, and is consulted about many matters that are not medical. He is looked up to with child-like faith for advice which it is known will be given with neither satire nor contempt. It is his duty to minister to the wounded spirit as well as to the weakened body. In my own case I have been encouraged to do this by the motto of my alma mater, the London Hospital, *Nihil humani alienum puto.*

CASES ILLUSTRATING DIFFICULTIES IN THE DIAGNOSIS OF EARLY TUBAL PREGNANCY.

By F. J. McCann, M.D., C.M.Edin.

Physician to Out-Patients, Samaritan Free Hospital.

The rapid progress which has occurred in the field of abdominal surgery has thrown a flood of light on many cases where accurate diagnosis was difficult if not impossible. More especially does this apply to cases of ectopic or extra-uterine pregnancy. Indeed this disease is not now regarded as rare, but on the contrary is being gradually shown from the experience of gynæcological surgery to be comparatively common. The occurrence in my practice of some cases presenting difficulties in diagnosis has furnished a text for the remarks in this paper. I shall describe three of those cases in detail.

(1) A married lady aged 27, was sent to me by my friend, Dr. Laing-Gordon, on November 16, 1897. She had been married for three years, and was sterile.

Her menstrual periods were regular, lasting five to six days, quantity profuse. At the onset of each period she suffered from severe pain, which continued until the menstrual flow

was well established. This pain caused her to remain in bed for one day at every menstrual period. The pain was referred to the sacrum and left iliac region. Shortly after her marriage she had an attack of what was alleged to be "inflammation of the bowels," from which she recovered. She stated that she was losing flesh.

Three weeks before she consulted me she had a sudden attack of pain in the left iliac region, accompanied by sickness and faintness. At that time her menstrual period had been delayed for fourteen days. After this attack she was confined to bed and was attended by a medical man in the country, who thought she had "inflammation of the bowels."

(I should explain that the attack came on when she was about to sing at a concert in the country; after having some brandy she was able to go through her performance.)

On bi-manual examination the uterus was found to be well developed, and situated forwards and to the right. The right ovary was large and prolapsed, and the right tube thickened. In the left posterior quarter of the pelvis there was an elongated fluctuating swelling. As I was of opinion that this was a dilated tube whose contents were leaking into the peritoneal cavity, I recommended operation.

On November 20, 1897, assisted by Dr. Gordon, anæsthetist, Mr. Lloyd, I opened the abdomen in the middle line between the umbilicus and pubis. The dilated tube was felt on the left side. Before the tube and ovary could be brought up through the wound some adhesions required separation. The tube was also adhering to the back of the uterus. During the process of separation the tubal wall, which was very thin at one part, gave way, and a portion of the contained blood clot escaped. This portion was afterwards found and examined. The broad ligament was clamped and ligatured, and the tubal swelling and left ovary removed.

When the right appendages were examined the tube was found to be thickened and the ovary adherent. The adhesions were separated. The appendages on this side were not removed.

The abdomen was flushed with hot salt solution, some clots being washed out during the process. The abdominal walls were sutured with silkworm gut. The operation lasted forty minutes.

The patient made an excellent recovery. The after treatment of the case was entirely carried out by Dr. Gordon, who removed the stitches on the ninth day. She is now in good health and the dysmenorrhœa has disappeared.

The husband of this patient had a chronic gleet when he married, and in all probability the attack of "inflammation of the bowels" soon after marriage was really gonorrhœal salpingitis. No decidual membrane was passed *per vaginam*.

Description of the parts removed:—The portion removed consisted of the left ovary and corresponding Fallopian tube. The tube was dilated to the size of a hen's egg, and contained an ovoid blood-clot with a small cavity in its centre. The tubal wall was very thin at the point where it ruptured during the operation. The abdominal end of the tube was dilated to the size of an ordinary lead pencil. Through this opening blood had escaped into the peritoneal cavity. Both the clot and the tubal wall were cut and examined under the microscope. No chorionic villi were found in either situation.

CASE 2 is that of a married woman, aged 37 years. She had had four children, the youngest being two years old.

Her menstrual periods began when she was seventeen and were regular until her marriage. Fifteen months after her marriage the first child was born. She had been ailing ever since the birth of this child. Her menstrual periods were irregular and accompanied by nausea. The interval between the periods was never longer than three weeks.

Six years and three months after her marriage she underwent Alexander's operation for shortening the round ligaments. Five years after this operation her second child was born. Two and a half years later her third child was born. Her last child was born two years before the present illness commenced. Since the birth of this child her menstrual periods had been regular until they ceased for three months.

On November 13, 1897, she felt ill, complaining of acute continuous pain in the right inguinal region and thigh. The thigh was also swollen. On November 17 she had a slight vaginal discharge of bright red blood. The swelling in the thigh disappeared. The pain continued to increase, being referred to different parts of the abdomen, but chiefly the right iliac and umbilical regions. The red vaginal discharge

ceased until November 21, when a greenish discharge was observed.

The temperature varied from 99° F. to 101·4° F. Pulse 100—120. The bowels were constipated. Micturition was difficult and painful.

I was telegraphed for by Dr. Campbell Pope on December 6 to see this patient. She then complained of intense pain in the right side of the abdomen. She was very blanched. Her skin was cold and clammy. The temperature was 101° F. The abdomen was slightly distended and very tender on palpation. There was dulness on percussion, extending upwards from the right iliac region to the level of the umbilicus. Bi-manual examination was very difficult owing to the pain. A mass could be felt on the right side of the uterus. As the condition of the patient was improving we decided that she should be examined under an anæsthetic on the following day, and that preparations should be made for an abdominal section. The necessary permission was obtained from the husband and relations to do what was required.

On December 7 the patient was anæsthetised by Mr. Lloyd and a careful bi-manual examination was made. An elastic elongated swelling was felt in the right posterior quarter of the pelvis, and a rounded fluctuating swelling which appeared to move with the uterus was also detected. This swelling extended above the pelvic brim on the right side.

It was therefore decided to open the abdomen.[1] An incision was accordingly made in the middle line and the abdominal cavity opened. The parietal peritoneum was considerably thickened. When the fingers were introduced through the wound a large sac was felt on the right side of the uterus posteriorly, and a large mass of blood clot in the region of the ampullary end of the Fallopian tube. The adhesions to the sac were separated and the tumour brought out through the incision. The broad ligament was clamped, then tied, and the tumour removed.

The left tube was thickened. The appendages on the left side were not removed. The abdominal cavity was flushed with hot salt solution and the walls accurately sutured. The operation lasted forty minutes.

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[1] Dr. Pope kindly assisted me at the operation.

One hour after the operation the evening temperature was 99·2° F. It then fell to normal, and remained normal.

The patient made an excellent recovery, the stitches being removed on the seventh day.

Much of the success of this case was due to Dr. Campbell Pope's careful treatment of the patient after the operation.

Description of the parts removed:—The Fallopian tube was widely dilated as well as the abdominal ostium. It contained a large blood-clot with a central cavity. Sections of the clot and the tubal wall show chorionic villi. About a pint of blood-clot was removed from the abdomen. The specimen is a well marked example of a tubal mole.

The diagnosis of tubal pregnancy before there is hæmorrhage into or around the ovum is usually accidental, for there are few symptoms. The existence of amenorrhœa and the changes in the breasts, which are usual in early pregnancy, together with a slightly enlarged uterus, and a swelling on one or other side of that organ, in the position of the Fallopian tube, strongly suggest tubal pregnancy.

When bleeding has occurred into the Fallopian tube, or through the patent abdominal ostium, there is added to the signs and symptoms pain and irregular hæmorrhage from the vagina. The character of the pain is important. It is sudden in onset and very severe, gradually diminishing, only to reappear when fresh hæmorrhage into the Fallopian tube or peritoneal cavity occurs. The pain is referred to the hypogastric and iliac regions. Some authors narrate cases where pain was absent. An irregular hæmorrhagic discharge from the vagina is an important sign. In some cases this is dark in colour, in others bright red. It is exceptional for the vaginal hæmorrhage to be severe and continuous for a lengthened period. In one patient from whom a tubal mole was removed continuous free hæmorrhage from the bladder had existed for six weeks before the operation. The usual appearance of the discharge resembles that seen in ordinary menstruation.

The source of the hæmorrhage is probably partly tubal and partly uterine. Blood may flow from the dilated tube into the uterus if there be no obstruction at the uterine end.

The uterus has a foreign body to expel, viz., the decidual membrane, which stimulates the organ to contract, as the

function of this membrane has ended with the death of the ovum.

It is always difficult to differentiate certain cases of inflammatory disease of the appendages from those of tubal abortion. Here, however, the history is of importance.

In inflammatory cases there is frequently a history of previous gonorrhœal infection or of chronic ill health for a lengthened period, probably dating from a confinement. Previous attacks of pelvic inflammation, usually termed "inflammation of the bowels," will be noted.

The character of the pain is somewhat different. It is more or less continuous, but may even be paroxysmal. A sudden exacerbation of the pain, accompanied by nausea and vomiting, may indicate leakage of pus through the abdominal end of the tube, should it be patent. This occurred in a case under my own care where a pyosalpinx was removed and the abdominal end of the Fallopian tube was found to be patent.

How closely intra-peritoneal hæmorrhage from a gravid tube simulates peritonitis may be gathered from the description just given of case 2. Here the abdominal pain, the extreme tenderness, the marked distension and the anxious countenance, were suggestive of peritoneal inflammation, yet there was only slight thickening of the parietal peritoneum. In most cases of tubal abortion no peritonitis is found. Further, the elevated temperature suggests inflammatory trouble. This sign is frequent in intra-peritoneal hæmorrhage from ectopic pregnancy.

The dulness in the right iliac region with marked swelling may suggest the possibility of an abscess in the region of the cæcum and appendix. The signs obtained by bi-manual examination will here come to our aid.

Again, pelvic hæmatocele may be unilateral, as is described in case 2. The usual description in text-books is that the hæmatocele is central in Douglas' pouch.

The condition which is most apt to be confounded with tubal abortion is a threatened or incomplete uterine abortion. Here let me urge the importance of making a careful bi-manual examination to detect the presence of any tubal swelling or exudation around the uterus.

The bi-manual examination should be employed with the

patient in the dorsal position, the vaginal finger or fingers being pushed outwards and backwards in the direction of the corresponding sacro-iliac articulation, while the abdominal hand is pressed downwards in the iliac regions. A satisfactory bi-manual examination cannot be made when a patient is lying on her side.

It is important to remember that such cases should be examined very gently and as seldom as possible, for it is not difficult to rupture a dilated tube during the examination.

The history of the passage of ovuline structures would further assist in the diagnosis where the abortion is incomplete. Cases of incomplete abortion with retained and decomposing portions of placenta are associated with a foul-smelling discharge, which is rare in tubal abortion (*see* case 2).

A careful examination should be made of any membrane or membranous shreds passed *per vaginam*.

In tubal pregnancy the membrane consists of the uterine decidua, while in uterine abortion there would be fœtal membranes and chorionic villi, the latter being well seen when floated out in water.

Such a distinction is important in cases of what Mr. Lawson Tait terms "fruitless pregnancy," where a complete cast of the uterus is passed, whose cavity contains a little limpid fluid, but without the presence of an embryo. Well-marked chorionic villi are found in such cases.

A good specimen of this condition has lately been referred to me, where the patient was suddenly attacked with uterine pains, and passed *per vaginam* a cast of the uterus.

Two important aids to the diagnosis of ectopic pregnancy still remain for consideration, viz., amenorrhœa and vaginal pulsation.

Amenorrhœa is not constant; if present it is of value. Cases of tubal abortion may have continued blood loss, and most frequently irregular hæmorrhages.

Vaginal pulsation, *i.e.*, pulsation in the fornix vaginæ, corresponding to the side where the lesion is situated, is of importance when present, yet it is found in inflammatory and other conditions.

To show how many signs and symptoms of tubal pregnancy may be found apart from that condition, I will describe a case

which came under my care shortly after I had operated on those already discussed.

CASE 3.—A woman aged 37 years, who had three children, the youngest aged 5. Her menstrual periods had ceased for two months. Her breasts were enlarging and she thought she was pregnant. She had several attacks of pain in the right iliac region, accompanied by sickness and faintness.

On bi-manual examination a mass was felt on the right side of the uterus, which appeared to move with that organ. There was marked pulsation to be felt in the vaginal fornix on the right side. I thought the mass was inflammatory, but at the same time I hesitated to give a definite opinion.

On opening the abdomen I was able, after separating adhesions, to ligature and remove this mass, which I found to be a dermoid cyst of the right ovary with a twisted pedicle. The cyst contained hair, a piece of bone and a tooth.

This case, although the last, is not the least in interest, for it exemplifies well the rule in diagnosis never to rely on one sign or symptom only, but carefully to consider all the signs and symptoms. Accurate diagnosis in cases of tubal pregnancy is of paramount importance, for many a useful life may be saved if operative treatment is carried out at once.

In order to make an accurate diagnosis it is well to know the conditions which may be confounded with tubal pregnancy, but it should be a rule in practice that, in any case of acute abdominal symptoms in a woman, always remember extra-uterine pregnancy.

CURETTAGE AS A ROUTINE MEASURE AFTER ABORTION.—In the *Buffalo Med. Jour.*, August, 1897, Goldberg makes a plea for the routine treatment of abortion by curettage of the uterus. Although deaths after abortion are rare, yet subinvolution and displacement, and diseases of the endometrium and connective tissue, often enough follow it. The bad results are in most instances traceable to the retention of parts of the ovum or membranes. It is most difficult to determine whether or not the uterus has completely emptied itself after an abortion during the early months of pregnancy, and by making use of a curette in every case the patient is given the best chance of complete recovery. Goldberg has not found it necessary always to tell his patients that a curettage was to be performed, and does not employ an anæsthetic. In all cases he uses a Sims' sharp curette, and has never yet seen any accident result from it.

OVARIOTOMY FOLLOWED BY PAROTITIS.

By A. W. Addinsell, M.B.

Abdominal surgery will always possess a fascination peculiarly its own, chiefly, perhaps, on account of the uncertainty of what we are going to find when the peritoneal cavity is opened. Cases that we expect to be perfectly simple turn out to be most complicated, and others in which difficulties are anticipated prove quite easy. Positive diagnosis is always hazardous, and only the other day I heard one of the most brilliant operators remark, "I operate first and diagnose afterwards."

The following case may be interesting for two reasons, namely, the difficulty of diagnosis and the variety of complications.

The patient, a lady aged 35, unmarried, first consulted me in February, 1897. Her story was that five weeks previously, that is, early in January, she was stooping to the bolt of a French window, when she was seized with a violent and sudden pain in her abdomen; this increased in severity, and her medical attendant was sent for. She remained in bed for three weeks in constant suffering in the lower part of the abdomen, during which time her period came on a fortnight too soon, and with a great increase in quantity. Her doctor informed her that she had strained her abdominal muscles, and advised a bandage. In five weeks from the onset of the pain I saw her. She was a virgo intacta. A complete vaginal examination was impossible, but I could detect a swelling, as I thought, to the left of the uterus. She was placed under an anæsthetic, and bi-manually I discovered a hard mass, about the size of a fœtal head, intimately connected with the uterus, which moved with and could not be separated from the organ; the sound passed 2½ in. I diagnosed a fibroma of the fundus, though I had expected to find a small ovarian tumour. Mr. Bland Sutton and Dr. Hugh Playfair both examined and both agreed that it was a fibroma. I sent her back to the country, and told her to let me know if she had increase of pain, or hæmorrhage, or if the swelling became larger. She returned in the end of September, having been perfectly well in the interval up to August, when she

went to Iceland. While there she rode on a rough pony for thirty miles, and afterwards was seized with violent pains. She remained in bed in a hut for five days and was then brought to England. I found the tumour was now reaching above the umbilicus, but it was not of the characteristic hardness one expects; it moved with the uterus. I wavered in my diagnosis, but finally gave it as my opinion that it was a a quickly growing fibroid, and as she was looking much worse, indeed very ill, was in constant pain, complained of numbness in the right leg, with great pain on micturition which made her dread to perform that function, and was also unable now to walk or to stand erect, I advised hysterectomy. My opinion was supported by two distinguished gynæcologists, and Dr. Wm. Playfair agreed also with me.

I operated on October 16, and found a multilocular cyst filled with thick viscid fluid. The cyst wall was closely and firmly adherent to the bladder and to the anterior surface of the uterus, which had two large fibromata proceeding one from the left, the other from the posterior walls. Old adhesions to the rectum were found, and the intestines in the left iliac fossa were covered with plastic lymph. When all adhesions were freed, I found a complete twist of the pedicle. The bleeding from the raw surfaces of the bladdder and uterus was troublesome. All went well for the first seven days; the temperature was 99° F. on the evening of the operation, normal the next morning, and remained so until the morning of the eighth day, when on waking the patient was unable to open her jaws. The left parotid and sub-maxillary glands were much enlarged; the pulse was 110, the temperature 103° F. The swelling of the glands reached considerable proportions, and the jaws remained fixed; suppuration did not take place. The temperature fell again to normal in three days' time, and since then the patient has made an uninterrupted recovery.

There are several lessons to be learned from this case.

It is clear that the origin of the pain early in January was a twist of the pedicle. Doran, Bland Sutton and others have pointed out that this is most likely to occur in the stooping position. Had I stuck to my original diagnosis at that time, I should have operated there and then; but the presence of the fibroma in the posterior wall, and the ovarian cyst

having become jammed between the bladder and the uterus and become fixed by adhesions, the three, namely, the cyst, uterus and fibroma, moved as a whole and thus deceived me.

Adhesions to the bladder are rare, and very troublesome from the hæmorrhage which ensues. It is often impossible to secure any bleeding point, and one must trust to irrigation of warm water previously boiled, used at a temperature of 110° F.

There are two clinical facts which occurred in this case which may be worth recording. On the day before the operation should have been performed I ordered an enema of soap and water and a vaginal douche of one in 2,000 perchloride of mercury. By mistake the nurse washed out the rectum with the perchloride solution, and while she was doing it the patient cried out in great pain, and immediately broke into a violent perspiration, became almost pulseless, and was markedly collapsed. I was immediately sent for; when I arrived—less than half-an-hour afterwards—the patient was evidently in great pain in the abdomen, the legs were drawn up, facial expression was very anxious, cold perspiration covered the body, and I quite thought she was going to die. Eventually she recovered in about ten days, but during that time she passed much blood and mucus, and was in great abdominal pain and distress.

On questioning the nurse very closely as to what had happened, I discovered that she had put the strong solution of perchloride of mercury into the douche-can first, and had added the water. This solution had naturally entered the tube, and when the tap was turned the solution had run unmixed direct into the rectum. It was a stupid mistake, which very nearly cost my patient her life, but to the ignorant and unthinking a conceivable error; and as one learns by mistakes, I venture to mention it.

The other clinical feature was this:—Being very careful to avoid a similar *contretemps*, the sister of the nursing home administered a soap and water enema the day before the operation was performed, and this enema was retained about ten minutes. The day after the operation the patient was covered with an irritable rash, which at first sight looked like scarlatina. But this was due to the soap-and-water enema, and I have on several occasions noted a similar result.

The rash lasts about three days, is very irritable, and is especially marked on the neck, where the night-dress rubs the skin. Happening after a confinement it is sometimes a source of anxiety, unless its character is recognised.

Parotitis following ovariotomy is not, I believe, frequently met with; at any rate, it is not frequently recorded. Stephen Paget, in 1886, compiled a series of 102 cases in which parotitis followed abdominal interference—27 ovariotomies; and most abdominal operators have met with one or two cases. Mr. Knowsley Thornton writes to me that he has met, I think, with two, and Mr. Alban Doran has also had two. I believe I am right in saying that Mr. Bland Sutton has not had a single case.

The process known as metastasis, where mumps are followed by inflammation of the mamma, sometimes going on to suppuration, is known. Orchitis following mumps is common enough, and it is clinically true that women suffering from mumps sometimes complain of pain and tenderness in the ovarian region, which, I suppose, we must consider as due to ovaritis. Fagge throws doubt upon the metastatic possibilities of mumps affecting the mamma, but I have myself opened a mammary abscess so caused, and I know of at least one other case. Where one is able to exclude the possibility of infection of mumps, and where there is no evidence of pyæmia, it is extremely difficult to offer a satisfactory explanation of the phenomena now under discussion. In my own case it was unilateral on the side where the ovary was cystic, there was also marked dryness of the mouth, and the submaxillary gland was involved. A disturbance of that vast network of sympathetic nerves which plays so important a part in the abdominal and pelvic viscera may, and probably is, at any rate partly accountable for this interesting complication. But I am inclined to agree with K. Thornton that at some future time it will be shown to be due to the more direct influence of the lymphatic system; and if this hypothesis be true, then we are forced to the conclusion that it is a manifestation of sepsis—some slight infection, very mild perhaps, but nevertheless an outward and visible sign of some defect in our antiseptic precautions; and I believe that the more perfect our asepsis the less frequently shall we meet with parotitis following

abdominal interference. Bacteriology at present throws no light upon the subject. It may be there is some selective bacillus for the parotid gland. The staphylococcus pyogenes aureus cannot claim this exclusive distinction.

Mr. Paget's case, reported at the Clinical Society, April 8, 1892, is, to my mind, not conclusive in favour of a nervous origin, for he admits that there was a loop of intestine fixed to the parietes and replaced the next day. It is at least conceivable that it may have become infected before replacement. Doubtless the nervous system plays an important part, and Mr. Paget tells us that arrest of salivation in a dog follows the drawing out of a loop of intestine, but that is by no means the same thing as acute inflammation of the parotid gland accompanied by considerable pyrexia. The subject is one not devoid of interest, but that interest is, I fear, for the moment chiefly speculative. On the whole, the conclusion I have arrived at is that the case for the nervous origin of parotitis following surgical interference of the abdomen is not proven, and that the balance of evidence is in favour of a mild form, almost a refinement of sepsis.

THE DIRECTION IN WHICH CANCER OF THE BREAST SPREADS.—Gerota (*Centralbl. f. Chir.*, September 4, 1897) has made investigations to determine the course of secondary infection from cancer of the breast. He finds that the lymph-vessels are intimately associated with the branches of the internal mammary artery. This explains the occurrence of the infection of the retro-sternal glands and the early adhesion of the pectoral muscles; and further, the occurrence of secondary nodules in these muscles. He also found that the glands of the thorax do not have independent sets of lymph-vessels but that these are in intimate relation with one another, which explains the spread of cancer from the right side to the left side, or the reverse.

CAMPHOR AS AN ANTI-GALACTAGOGUE.—Dr. Herrgott (*Rev. Med. de l'est*), being dissatisfied with the effect produced by the usual anti-galactagogues, including antipyrine, has tried camphor, and finds that nine and one-quarter grains a day, divided into three doses, and given for three days, nearly always produce a remarkable diminution of the secretion.—*N. Y. Med. Times.*

Report of Proceedings.

Ordinary Meeting—Friday, October 7, 1898.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

The PRESIDENT delivered his opening address, which is published in full on page 1.

THE VOTE OF THANKS.

Mr. F. LAWRANCE: I have much pleasure in rising to propose a vote of thanks, and asking you to join with me in thanking our new President for the very excellent address with which he has opened this session. It has been interesting, useful and practical. Interesting, inasmuch as it contains a great deal of information and anecdote; useful, by giving us much good advice; and practical, as we can apply it to ourselves in our daily work. I am not sure that we can carry out all that he has said; if we do I am sure we should be perfect members of the profession. Our new President is one of the original members of our Society, and I congratulate him on coming to the Presidential Chair, and ourselves, on being placed under his Presidency during the ensuing session. I therefore propose, formally, a vote of thanks to the President for his inaugural address.

Dr. H. P. POTTER: I have much pleasure in seconding the vote of thanks to Dr. Clippingdale for his admirable and interesting address, which must have taken some considerable time to elaborate and bring to such a successful issue. We have listened to some topics of pregnant interest to practitioners of general medicine, and no doubt some of the subjects might with advantage be further discussed. I am sure I re-echo the sentiments of this Society when I say we are much indebted to Dr. Clippingdale for his address, which augurs well for the further success at our meetings this session.

Ordinary Meeting—Friday, November 4, 1898.

Dr. D. S. CLIPPINGDALE, President, in the Chair.

Dr. F. J. McCANN read a paper on—

Cases Illustrating the Difficulties in the Diagnosis of Early Tubal Pregnancy,

which is published in full on page 13.

The following discussion then ensued:—

Dr. ALDERSON: Perhaps one of the more important results of a practical and instructive paper, such as that to

which we have just listened, is to have our knowledge increased or confirmed by our attention being drawn to the earlier diagnostic signs of this condition, and I would like to call attention to the green discharge that the author mentions that occurred in his second case. I remember a similar green olive-coloured discharge that was a prominent symptom in an interesting case of a tubal pregnancy, the notes of which I read to this Society at one of its early meetings, and subsequently showed the patient. The fœtal bones were passed *per rectum* (except of course the head, which never suppurates), and if I may be permitted the digression I would like to mention that the patient made a good recovery after a long illness, without operation. She escaped all the evils, such as apoplexy, meningitis or sudden death, that are said sometimes to follow even a recovery in cases where no operation has been allowed. She has, in fact, enjoyed excellent health since the cessation of the climacteric period, now some years ago. I would like to ask Dr. McCann if he would not recommend that the bi-manual examination of the patient, which he advises, should be done under chloroform, inasmuch as the examination to be efficient must be thorough and, if complete, might be likely to produce an acute peritonitis, or even perforation and a fatal result. I do not quite agree with the author that ectopic gestation is frequent, but undoubtedly more cases are recognised and recorded than formerly. I have attended some 2,000 or 3,000 cases, and have only met with one in my own practice, and my experienced neighbour, Mr. Barnes, has just told me that he has attended over 4,000, without a case. Ectopic gestation may not infrequently cause sudden death, and be mistaken for poisoning. I remember once making a *post-mortem* examination by the coroner's order, where rupture of the Fallopian tube at about two months' conception was the cause of death.

Mr. G. E. Twynam: Dr. McCann is to be congratulated on bringing forward for discussion the early diagnosis of these cases. Recently I had the case of a woman, aged about 35, whose menstrual periods had always been normal without pain. At the onset of a regular period she had intense pain in the right side of the pelvis, with an excessive flow and high temperature. At first it was thought to be merely a chill, but the flow continued for fifteen days, without any clots or membrane, except one or two quite small clots. When examined after flow ceased, the uterus was found pushed over to the left, with a large "boggy" swelling occupying the right side, semi-fluid in parts, and giving one the impression of effused blood. This has practically cleared up, but leaving some induration of the parts. The uterus has returned to the

middle line. This woman was not operated on, but the case seems to me to be on all fours with the first one mentioned by Dr. McCann. The point raised by him, that increased pain is followed by increased flow, should be carefully looked for.

Dr. T. R. ATKINSON: Having attended nearly a thousand cases of midwifery, and I may add without a single death, and also without any permanent injury to the mother, it seems singular that I have never come across a case of tubal pregnancy, if it is a common disease. There are several members of this Society who have a large obstetric practice, and one would like to hear their experience. My conviction is that tubal pregnancy is a rare occurrence. The preceding speaker does not hold this view, and has mentioned a case in which sub-involution of the uterus was a marked feature. This has reminded me that I have seen cases of sub-involution in which the os was chronically dilated to the extent of about an inch, and came down to the vulva in such a manner that in the act of a strong coition the semen would no doubt be directly injected into the uterus, and the spermatozoa might possibly find its way into the orifices which exist there. This, I venture to think, might suggest one explanation of the matter before us. What has been said about operating has been well put by Dr. McCann. When there is plainly something to operate on the surgeon must act promptly, but one needs to be careful in the diagnosis.

Dr. ADDINSELL: I congratulate Dr. McCann on his interesting paper. There are few subjects in the whole realm of medicine more important, not only on account of the difficulties which sometimes arise in diagnosis, but chiefly on account of the brilliant results which follow an early recognition and a successful operation. I have recently been associated with two cases well illustrating these points. The history of tubal pregnancy is still comparatively in its infancy, and it is important that all cases should be accurately recorded. The presence of blood and blood-clot in the peritoneal cavity produces grave constitutional disturbances which, if the patient has not suffered from sudden and alarming illness, often leads to mistaken diagnosis. It is my belief that the danger lies in not recognising the gravity of the position in many cases. The twisting of the pedicle of an ovarian cyst is often extremely difficult to differentiate from tubal rupture or tubal abortion. Fortunately, in either case cœliotomy is the one and only proper treatment, and that should be prompt.

Dr. CAMPBELL POPE: Having had the pleasure of assisting

Dr. McCann in the second case narrated by him, I should certainly call attention to the fact that the case was done in a cottage, without any of the usual hospital advantages, and the successful result points strongly to the perfection of his methods of operating. With regard to Dr. Atkinson's remarks on the direct entry of the male organ into a low-lying patent os uteri, this could have hardly happened in the second case, as the uterus was high owing to the round ligaments having been previously shortened by Alexander's operation. If it be true that extra-uterine pregnancy is more common in the working classes, such a result may be due to their more arduous life, and especially to positions assumed in some forms of work, such as in scrubbing floors, &c.

Dr. DRUMMOND ROBINSON: Many points of great interest have been raised by Dr. McCann in his paper, and by those members who have joined in the discussion, but time forbids me to do more than refer to one or two. A case that I saw when I was midwifery assistant at St. Bartholomew's Hospital illustrates the difficulty of diagnosis in cases of early ectopic pregnancy, and to my mind also emphasises the importance of refraining from operation unless there is some special call for surgical interference. This latter point has been alluded to by a former speaker, and in that matter his views and mine entirely coincide. A young married woman, who had not menstruated for some weeks, was brought to the hospital in the early hours of the morning suffering from retention of urine without obvious cause. While passing the catheter I noticed a mass at the vaginal orifice, which proved to be a very typical decidual cast of the uterus; there was no trace of chorionic tissue in it. A careful bi-manual examination showed that the uterus was somewhat enlarged, but absolutely nothing abnormal could be found in the pelvis. Nevertheless, on the strength of the passage of a decidual cast I admitted the patient to the hospital. She was seen on the same day by the assistant obstetric physician, and the abdomen was at his request opened by one of our former Presidents, Mr. Bruce Clarke. No trace of ectopic pregnancy could be found. This case was published in the *Transactions of the Obstetrical Society*, and since then two very similar cases have been recorded by Drs. Dakin and Eden. Hence the passage of a decidual uterine cast, which does not show chorionic villi, is not, as was formerly supposed, positive evidence of extra-uterine gestation. Furthermore, as the subject of treatment by operation has been alluded to in the discussion, allow me to say that I cannot agree with the view that all cases of ectopic pregnancy ought to be operated on. It is now universally acknowledged that the so-called cases

of "hæmatocele" of former days were, in the vast majority of instances, really cases of extra-uterine pregnancy. These cases were never operated on, but nevertheless a very large proportion of them recovered. This fact is too often overlooked by many at the present day, and I fear that the operation for ectopic pregnancy is somewhat overdone in certain quarters. I am unable to accept the view that the fact that a patient recovers from an operation in itself justifies that operation. Do not misunderstand me; there are many cases of extra-uterine pregnancy in which prompt surgical interference will alone save the patient's life, but I am convinced that there are also many cases in which the patient will recover without any operation at all.

Dr. McCann: I am pleased to find that my paper has given rise to such an interesting and important discussion, and I shall attempt to answer the speakers in order. Dr. Alderson referred to cases where abscess formation had resulted and portions of the fœtus had been expelled. This state of things did supervene in the olden days, but now that the diagnosis of tubal pregnancy is better known such sequelæ will not occur, as early surgical treatment can be employed. It is rare to find an offensive discharge associated with early tubal pregnancy. I regard a bi-manual examination as absolutely necessary before a correct diagnosis can be made, and during this examination the patient should be in the dorsal position. As to the necessity for an anæsthetic I am strongly of opinion that if the patient be anæsthetised preparations should also be made for an operation, and thus obviate the necessity and danger—for there is a danger—in having the patient twice put under an anæsthetic. The question of elevation of temperature is of great importance in intra-peritoneal hæmorrhage from a gravid tube. This contrasts with what is found in cases of pelvic suppuration, where there is little or no elevation of temperature. I believe, with Dr. Addinsell, that the best division of early cases of tubal pregnancy is into those associated with rupture of the tube, and those associated with hæmorrhage from the dilated abdominal end of the tube. The latter is much more frequent. As to the frequency of cases of ectopic pregnancy, I am inclined to think that this will be even better established in the future, as our methods of diagnosis improve. There are certain cases of ectopic pregnancy which may be left to Nature. It is, however, still a moot point as to what cases can be safely left alone. Several patients suffer for years from uterine and tubal adhesions after the blood clot has been absorbed. Operation would save this suffering. Mr. Twynam's case is of great interest, and appears to resemble closely case 1

in my paper. I must thank Dr. Campbell Pope for his kind remarks, and would say again how important it is to have these patients properly cared for after the operation. I have read the report of the case referred to by Dr. Robinson, and it only emphasises the danger of forming a diagnosis on one sign or one symptom. Casts of the uterus without evidence of chorionic villi can be passed *per vaginam* in other conditions, and are not pathognomonic of ectopic gestation. As I have already said, further experience will teach us what cases may be left to Nature. In conclusion, I must return my best thanks for the kind reception accorded to my paper.

Dr. A. W. ADDINSELL read a paper on

Parotitis following Ovariotomy,

which is published in full on page 21.

The following discussion afterwards took place:—

Mr. STEPHEN PAGET: Though we admit that some of these cases are septic, yet out of 100 cases that I collected only seven had secondary abscesses elsewhere, and not one had any suppuration in the joints. In 33 the parotitis subsided without suppuration; and of these 33 only one died, and she died of cancer. This parotitis may come of conditions that have nothing to do with septic infection, and in one case the parotitis appeared on the morning fixed for the ovariotomy, some hours before the operation. There was no breast case among my 100 cases, but I have just had a case of sudden swelling of both sub-maxillary glands after removal of the breast; the operation was done on Monday and the glands swelled on Thursday. The temperature was normal, and the glands subsided in two or three days. We must acknowledge the influence of the nervous system in these cases; they are not septic.

Mr. L. A. BIDWELL: I am inclined to agree with Dr. Addinsell rather than with Mr. Paget, as to the nature of these cases. It is now a generally received opinion that parotid bubo is an index of some septic absorption. The fact that it occurs after slight surgical procedures such as passing a catheter, changing a pessary, as quoted by Mr. Paget, is no argument against the septic origin of the condition, since we all know that septic infection does take place after any of these procedures. Personally, I have had three cases of parotitis occurring after operation; two of these were operations on the pelvic organs of women, and the third was a case of extravasation of urine from an impacted calculus in an old man. The two abdominal cases made a good recovery, but the old man died—two of the cases suppurated. The last case which I have seen was in a lady on whom I

performed abdominal hysterectomy for large cystic fibroma four years ago. The temperature remained normal till six days after the operation, when it rose and a right parotid bubo appeared; the temperature remained at 103° for two days, when pus was evacuated from the bubo, and all went well. Meanwhile the abdominal wound had completely healed and there had been no sign suggestive of any peritonitis or local suppuration. In accordance with my belief in the septic origin of parotitis I must admit some septic infection in the case, although there was no sign at the site of the operation. Another point in favour of the septic origin of these cases is the fact that they are now much more rare than formerly, and this is to be accounted for by the better precautions which we are now able to take to prevent sepsis. All my cases occurred from four to eight years ago; since then I have never seen a case.

Mr. KEETLEY: Great enlargement, apparently inflammatory, not of the parotid but of the sub-maxillary gland, followed a few days after I had opened an abscess caused by a perforating appendicitis. The patient was an adult male, in fact, a member of a profession allied to our own.

Dr. McCANN: I have no doubt that certain cases of parotitis are due to general septic infection, but I believe a more common cause is a septic condition of the mouth. This is more often seen in abdominal cases, because the patient is so frequently nourished *per rectum* and the mouth soon becomes very septic. Now that this method of feeding is less frequently employed, fewer cases of parotitis from this cause are observed.

Dr. C. PERCIVAL WHITE: After the case just quoted by Dr. McCann it may be of interest to mention the case of a lady I saw a short time ago; she had a severe attack of hæmatemesis due to a gastric ulcer. On the eighth day of her illness the left parotid gland became enlarged, the right following suit the next day; this was accompanied by some pyrexia and great pain; the swelling of both glands had completely subsided in four days, no suppuration taking place. As the patient was being fed entirely by the rectum, her mouth was naturally dry and unclean, and I then looked upon the case as one of local sepsis, the infection spreading from the mouth up the duct. In the cases of parotitis collected by Mr. Stephen Paget, only two cases of the 101 occurred after gastric ulcer, so that it may be assumed the complication is a rare one. In the case mentioned I was, I think, quite able to exclude ordinary mumps.

Dr. C. C. GIBBES: The occurrence of parotitis in enteric fever has a bearing on this question; in this disease we have

suppurating and non-suppurating cases, and it seems to me that they probably have more than one origin.

Dr. ADDINSELL: Despite the arguments of Mr. Paget, I am still unconvinced of the purely nervous origin of this complication. I submit that in all the cases relied upon by Mr. Paget and quoted by him in support of his hypothesis, there is much more than a possibility of septic infection. Take the case he calls the simplest, the introduction of a vaginal pessary: it was followed by vaginal discharge, by fever and by parotitis, its removal and application of douches was followed by recovery. Clearly the woman was infected by the introduction of pathogenic organisms—the evidence is to my mind conclusive. For my own part I rarely, if ever, sanction the use of a pessary. I am glad Mr. Bidwell agrees with me. The more perfect our asepsis the fewer the cases of parotitis in operations. A careful examination of the recorded cases, and of all cases reported to me, has convinced me that there are evidences of sepsis which cannot be set on one side. I beg to offer my thanks to the Society for the kind reception of this paper.

Clinical Meeting—Friday, December 2, 1898.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

Case of Black Tongue.

Dr. BALL: This girl, aged 4, is affected with so-called black tongue. The dark surface occupies an area, in front of the circumvallate papillæ, measuring about ¾ of an inch across to 1¼ inches from before backwards; the surface near the edges and the anterior parts of the tongue being free. The affected area is of a dark brown colour, but until a week ago it was almost quite black. The characteristic hypertrophy of the filiform papillæ is well marked. The child is attending the hospital for chronic otorrhœa, and the tongue condition has been observed for two months, but the mother said it had existed about three or four months. It was discovered accidentally, and has given her no trouble. The affection has been more commonly observed in old people.

My second case is one of

Rheumatoid Arthritis in a Boy.

This boy, aged 10½ years, is suffering from a chronic disease of his joints, associated with enlargement of the lymphatic glands. The disease began two years ago, after influenza, with pains in the arms and legs, and since then he has been laid up repeatedly with attacks of pain and swelling of joints,

and fever. Certain joints now remain persistently enlarged between the attacks. There is nothing special in the previous history. Rheumatism is said to prevail in the father's family; the mother is insane; four brothers are healthy. The wrists and knees are the chief seat of the chronic progressive change. There is very marked wasting of the muscles of the upper and lower limbs. The glands in both axillæ are enlarged, and to a less extent than those of the groins. The spleen cannot be felt. The heart's apex beat is in the fourth space, an inch outside the nipple, but no murmur is present. It seems that the displacement of the heart is due to retraction of the left lung, resulting from some former trouble. This case is one of the class of cases described by Dr. Still which, though commonly referred to as rheumatoid arthritis in children, is probably not identical with that disease, presenting important differences both in the clinical symptoms and morbid anatomy from rheumatoid arthritis as seen in adults.

Mr. McAdam Eccles: I would like to ask Dr. Ball whether he has taken the opportunity to examine fluid from any joint for bacteria. In the cases of rheumatoid arthritis in adults some observers have, I believe, found bacilli.

Dr. Bennett: I should like to ask Dr. Ball what treatment he has adopted in his second case, and what the effect of such treatment has been.

The President: I should be interested to learn from Dr. Ball whether he considers that the pigmented area in his first case corresponds to the parts supplied by any special nerve, also whether any microscopic examinations have been made in this or similar cases.

Dr. Ball: With regard to the first case I may say that a neuropathic origin has been suggested for the affection, a view which perhaps is supported by the bi-lateral symmetry of the patch, which is always present. All that is certain is that there is a disturbance of the normal evolution of the epithelium of the filiform papillæ, which undergoes hypertrophy and cornification, and owing to their increased resistance to external agents the papillæ attain this abnormal length. The theory that the affection is due to a mycotic growth lacks confirmation. With regard to the second case, treatment appears to have had little or no effect. The disease has been gradually progressing, and the patient has now become crippled. The boy is at present taking arsenic. No bacterial investigations have been made in this case up to the present.

A Case of Psoriasis.

Dr. P. S. Abraham: In this girl, aged 5, the thumb became painful and the nail was lost a year ago; recently

most of the other terminal phalanges have become affected. When first seen three weeks ago the digits were red and inflamed, with dry desquamation; two of the nails had been lost and one was apparently in process of being shed. Psoriasis was suspected though the characters are by no means typical, and the diagnosis was subsequently confirmed by other patches of more typical psoriasis, which appeared on the legs and elsewhere.

A Case of Lichen Ruber Acuminatus.

Dr. P. S. ABRAHAM: In this man, aged 54, the eruption appeared one year ago on the thighs, back and abdomen. When first seen by me in July it had the appearance of a very red papular eczema. The extreme pruritus is and always has been a marked feature, and quite recently over the lumbar region the man has extensively scratched himself, and there is now vesication and excoriation. He has been taking arsenic in large doses, and in spite of anti-pruritic external treatment but little relief has been obtained. A case such as this might be confounded with one of papular eczema, lichen planus, or pityriasis rubra pilaris of Devergie.

Dr. WHITFIELD: I am sorry to have to disagree with Dr. Abraham as to the diagnosis of this case. There appear to me altogether four diseases which should be considered in coming to a conclusion about the diagnosis. These are lichen ruber planus, lichen ruber acuminatus, pityriasis rubra pilaris (Devergie) and eczema. I should like to say that I am in agreement with Dr. Abraham that lichen ruber acuminatus (Kaposi) and pityriasis rubra pilaris (Devergie) are not really the same disease, though often confounded, and that while I was studying with Kaposi I observed that he included both diseases under the term lichen ruber acuminatus. The reasons I give for believing that the case in question is not one of lichen ruber acuminatus, are the following:—In the first place this is to my mind a distinctly moist rash. Dr. Abraham claims that this is due to excoriation, but I maintain that the appearances are not those of simple excoriation. There is plenty of excoriation on the shoulders, and here the usual lines of scratched papules covered with blood crusts are very evident, but on the loins, where the rash is freely discharging, one sees easily with a lens that each papule is surmounted by a vesicle, there is no formation of scratch lines, and the epidermis is in many places quite sodden with the exuded fluid and yet not abraded—surely a curious result to be brought about by mere scratching. Secondly, the papules are not acuminate, but far more like, to my mind, those of the plane variety of

lichen ruber than the acuminate. Drocq has pointed out that in old rashes this tendency to what he calls lichenification is very frequent, and it therefore does not in the presence of the serous exudation justify the diagnosis of lichen ruber planus. Lastly, I may point out that the palms are quite unaffected, a state of affairs that I have never seen in a well generalised case either of lichen ruber acuminatus or pityriasis rubra pilaris. The whole aspect of the case, therefore, seems to me to justify the diagnosis of eczema, probably belonging to the seborrhœic variety, and corresponding closely to what Neisser has described as eczema folliculorum.

Dr. ABRAHAM: I should like to point out that Dr. Whitfield has only seen the second case for a few minutes this evening, and has not had the opportunity of watching its progress. I see no reason to change my diagnosis, as for nearly a year the lesions have been distinctly papular, dry, acuminate, and of a dark-red colour, and most resistant to treatment. They are certainly *now* flatter, and I can quite understand a diagnosis of "eczema" being made, looking only to the recent weeping surface on the man's back.

A Case of Recovery from Hepatic Cirrhosis.

Dr. F. H. ALDERSON: I have here a man aged 57, who formerly a policeman, is now a night watchman, the notes of whose case are as follows:—He was under my care from December 7, 1896, until the second week in March, 1897, suffering from cirrhotic liver and heart disease. His ascites and breathing becoming much worse, I sent him into the West London Hospital, and he was admitted a patient into Rothschild Ward about March 10.

Two or three days before his admission his countenance was sallow and anxious, he was emaciated, and the skin generally of a yellow hue. Pulse irregular, varying from 100 to 120; girth 59 inches at umbilicus; respiration short and at times difficult; loud systolic murmur heard both at cardiac apex and base; bowels constipated; veins of abdomen largely dilated and very prominent. For the last six months or more he had suffered from the usual premonitory symptoms of hepatic cirrhosis—there was history of alcoholism—such as morning sickness, hæmorrhage from rectum, external piles, and frequent chronic gastric catarrh. Two days after his admission into hospital he was tapped with, I conclude, one of Southey's tubes (for the patient said it was a very small one), and the tapping took a very long time, by which eighteen pints of clear fluid were withdrawn; and again fourteen days later six pints.

On April 5, he returned home, having discharged himself from the hospital, feeling he was no better. On the 23rd he again measured 59 inches at the umbilicus, and his thighs, scrotum, and penis were œdematous, and his breathing considerably embarrassed. I decided to tap him, and drew off 15 *quarts* of clear fluid, and a large quantity escaped. The patient expressed himself as very much benefited by this tapping and was evidently greatly relieved. Feeling comparatively well he got up, and went downstairs. But on the Sunday following I had an urgent message to say "his stomach was burst," and to go at once. I found that the punctured wound of the trocar had given way, and fluid was flowing from his abdomen like a water-spout. This I quickly closed with collodion wool and strapping, and his recovery was quick and uninterrupted.

The abdomen did not refill nearly as quickly as on the previous occasion, but it became necessary to tap him again, and this was done on June 1. I used a small special tube that I had made (about three times the calibre of a Southey), and drained off at least 11 quarts in about four hours. His recovery was even quicker than before, neither did the abdomen refill for several days; but on the 21st, the ascites still being considerable, I had arranged for another tapping, when I found on measurement that he was so much smaller, that I decided to postpone paracentesis at least for a time, and gradually the ascites disappeared under the treatment of blue pill, grey powder, followed by tincture of digitalis, magnes. sulph. and cathartic saline aperients. The patient at the present time only measures 39 inches, his normal girth before his illness having been 42 inches.

I think this case is of value as it proves that paracentesis abdominalis is of use in somewhat advanced age in hepatic cirrhosis, for even of late years it has been the custom to tap only in the young and robust, and then only to repeat the tapping once or twice. Dujardin Beaumetz says, "In true cirrhosis, instead of prolonging existence it hastens the end," but qualifies this statement subsequently by admitting that in some cases a cure follows. Some modern authorities advise *small* but frequent tappings. Formerly it was recognised that life was seldom prolonged under any treatment for hepatic cirrhosis beyond a year after the symptoms were first pronounced.

This patient has remained comparatively well since his last tapping eighteen months ago, and he has resumed his employment of a night watchman.

Dr. TRAVERS: I object to the word "cure" applied to this case. The "Premonitory Symptoms of Cirrhosis" so-called

by the author, would probably only mean that the cirrhosal condition had already produced a marked effect on the general state. Despite a remark made by Dr. Alderson (although outside this case) that he uses for tapping ascites such a trocar as he used in tapping an ovarian cyst, I thought that the time was very long past when it was deemed justifiable to tap an ovarian cyst under any conditions.

Dr. C. W. CHAPMAN: My chief difficulty is to reconcile the title of the case with its clinical history. The case was to my mind clearly one of cardiac dropsy, for not only was there a history of valvular disease, but the heart is at the present time in a serious condition; moreover the liver is very much enlarged. I anticipate an early breakdown. As to the repeated tappings, I had recently a case in which the patient had been tapped ten times in little over a year.

Mr. L. A. BIDWELL: I think that the prospect of cure of the ascites in cases of cirrhosis of the liver after repeated tappings, or after incision and drainage, depends chiefly upon the cause of the ascites. It is now well recognised that ascites may be due to a local peri-hepatitis, or to obstruction of the vena cava. This was shown a few years ago by Mr. Rutherford Morrison, who performed laparotomy on several cases of ascites in connection with liver disease, and on examining the surface of the liver by a speculum passed into the abdominal wound, he found patches of peri-hepatitis in several cases, and it was these cases in which the ascites was cured by the operation of incision and drainage. In cases of ascites from pressure on the vena cava, neither repeated tapping nor incision and drainage has much chance of success, and in the case of the latter operation being performed, and no local peri-hepatitis being found, I would advise closure of the abdominal wound, since cases of this sort seem to go down hill rapidly after drainage, whereas those in which the cause of the ascites is local are greatly benefited.

Mr. MCADAM ECCLES: In usual experience recovery from ascites due to cirrhosis of the liver is very rare, and the case Dr. Alderson has shown is of much interest. Fluid in the general peritoneal cavity of long duration is, in general, due either to pressure on the portal vein, cardiac disease, or tubercle. We all know the good effects of simple laparotomy in tuberculous disease. I have twice performed laparotomy in cases which I believe were syphilitic cirrhosis, in one case after thirty-five tappings, but not with very satisfactory results.

Dr. H. A. CALEY: The existence at the present time of considerable dilatation of the heart with definite myocardial weakness, and the fact that when the ascites was most severe there was positive evidence of valvular incompetence, suggest

that the ascites was in part due to backward pressure of cardiac origin, and not entirely to portal obstruction from the cirrhosis of the liver. The importance of peri-hepatitis and chronic peritonitis in connection with the ascites of cirrhosis of the liver has also to be borne in mind. In cases of the kind early and repeated paracentesis is at times followed by marked and lasting improvement, as in the present instance.

Dr. ALDERSON: Dr. Chapman appears to think this case was one of cardiac dropsy and not cirrhosis. The case was complicated, as I mentioned, with heart disease; but that certainly would not account for the very large amount of ascites, the prominent and greatly dilated abdominal veins, the sallow countenance and icteric tinge of the skin, nor the preliminary symptoms of morning sickness, general gastric catarrh, piles, and the hæmorrhage from the rectum. Much ascites is pathognomic of hepatic cirrhosis, while general anasarca is usually the result of cardiac disease. When I sent the patient into the hospital the disease was far advanced, yet I had attended him more or less for two or three previous years, and the early premonitory symptoms of cirrhosis to which I referred I had noticed several times before. I did not desire to bring up the subject of ovarian dropsy; I only mentioned that I used the same trocar and canula at my first tapping that the late Dr. Wiltshire had recommended and used. I have not tapped for ovarian dropsy for at least ten or twelve years.

With reference to the remark that "recovery from cirrhosis was only like sending the patient to the workhouse," I wish to emphasise the fact that this man resumed his usual employment of a night watchman several months ago, and he still continues to feel well. I have not, however, shown him as a case of recovery from cardiac disease, but from *cirrhosis*, of which he has now no symptoms. The last tapping was on June 1, 1897. I hope that I have, in exhibiting this case, at least shown that in paracentesis abdominalis we have for hepatic cirrhosis a remedy, most useful to the patient and satisfactory to ourselves.

A Case of Submaxillary Cyst.

Mr. McADAM ECCLES: This woman, aged 39, first noticed the swelling in the region of the left sub-maxillary region two years ago. There has been no pain, and the swelling has remained apparently the same size. On examining the mouth there is no evidence of calculus in the left duct of the sub-maxillary gland, but the flow of saliva from it is very feeble as compared with the opposite side. There is no definite enlargement after mastication.

A Case of Swelling in the Left Parotid Region.

This man, aged 25, first noticed a swelling in the left parotid region two years ago; there is no evidence of other swellings in the neck. He has several bad teeth.

Mr. L. A. BIDWELL: The first case shown, if it prove to be a cyst in connection with the submaxillary gland, illustrates a very interesting point in connection with retention cysts. In this case Mr. Eccles informs us there is escape of saliva from Wharton's duct in the left side, but in diminished quantity. Now, had Wharton's duct been completely obliterated we should have expected to find atrophy and not cystic distension of the gland. The behaviour of the kidney in cases of blockage of the ureter is precisely similar; thus, if the ureter be completely occluded we get atrophy of the kidney, but if the ureter be only partially and intermittently occluded we get hydro-nephrosis. The patent condition of Wharton's duct will explain the flaccid consistence of the cyst in this case.

Mr. R. W. LLOYD: I should be glad to know how Mr. Eccles intends to treat his first case? If he means to remove the tumour I hope he will show it at a subsequent meeting of this Society.

Mr. MCADAM ECCLES: I have to thank Mr. Bidwell and Mr. Lloyd for their remarks. It is very interesting that retention of fluid can occur in a gland whose duct is but partially blocked, but it is a well-known fact that it does occur, and in the case of certain hydro-nephroses it may be due to the passage of a ureter obliquely through the muscular tissue of the bladder wall. I do not know that there is any similar anatomical condition in connection with the duct of the sub-maxillary gland. I hope that I may be able to show the swelling after removal, at a subsequent meeting of the Society, if the patient will consent to its removal.

A Case of Comminuted Fracture of the Olecranon.

Mr. KEETLEY: This is a case of comminuted fracture of the olecranon. The accident took place a year ago, most of the olecranon was in fragments which had to be removed; only a shell of bone at the tip remained. It was wired to the ulna. The movements are perfect. The wire caused some inconvenience and was recently removed. The man's age is 30.

Mr. MCADAM ECCLES: I should like to ask Mr. Keetley whether it is his general rule to remove the wire after operation upon a case of fractured olecranon.

Mr. KEETLEY: It is generally better to remove the wire from a sutured olecranon. It lies superficially at a point exposed to much pressure. In taking it out the traction should be downwards (towards the forearm).

A Case of Pityriasis Rubra.

Dr. WHITFIELD: I have here a case of one of the less common varieties of skin disease, namely pityriasis rubra. The patient is a stableman, aged 48, whose past history presents nothing of particular interest until ten years ago, when he had an attack of what was then called scarlatina. He was covered from head to foot with a red rash which was followed by extensive peeling. Since that time his skin has never been like those of other people. With every period of cold weather the redness and desquamation have set in again at once, and during the whole time he has always been rather red, and peeling more or less. I therefore think that this must be considered one of the primary cases, which are much less common than the secondary ones supervening on old chronic skin disease of other kinds, especially when over-treated with strong drugs. You will see now that he is covered from head to foot with a red eruption and with large thin scales. There is no part of the skin spared, even the palms and soles being to some extent affected. The nails alone are healthy. If you search carefully all over him you will find no trace of any individual lesion, he is one sheet of red, scaling, dry skin. There is not a trace of moisture anywhere, and even his normal secretion of sweat is entirely arrested, except for a slight degree in the flexures of the joints. The skin is everywhere harsh, stiff and inelastic, so that when he moves you see the lines of tension appear. His internal organs are apparently quite sound, though his heart sounds are almost inaudible. The urine is free from albumen. When he came into the hospital he seemed very ill and weak, but under good feeding and rest he has greatly improved. For the skin condition he has been treated with carron oil containing one per cent. of resorcin, under which he has considerably improved.

Dr. ABRAHAM: In this case I notice a marked atrophic condition of the man's skin where the scales have been removed. I quite agree with the diagnosis of pityriasis rubra and consider it a most interesting case.

Dr. WHITFIELD: I think Dr. Abraham must be under some strange misapprehension as to my diagnosis in this case. I was careful to say, in introducing the case to your notice, that it was a case of pityriasis rubra without any suffix. This being so, I must confess my surprise on finding that Dr. Abraham was under the impression that I considered it one of pityriasis rubra pilaris. I am glad, however, to find that in reality we are in agreement about the diagnosis of the case, and I must thank Dr. Abraham for pointing out what I have in my notes, and thought I had mentioned—namely, the considerable atrophy of the corium present.

The Mirror of Practice.

RUPTURE OF KIDNEY—SECONDARY HÆMORRHAGE —NEPHRECTOMY—RECOVERY.[1]

By G. E. Twynam, L.R.C.P., M.R.C.S.

C. McK., aged 11, a bright intelligent boy, came under my care on May 13, 1894, having met with a serious accident. The history he gave was that he was sitting on a fence about 4 feet high, and that in jumping down his heel caught on the top, and he fell forward flat on his face, and does not know whether he struck a stone lying on the ground, or whether it was only the bundle of crackers he had in his pocket, but he had a severe pain in the right lumbar region.

He was brought to the Hospital, and passed his urine naturally, but it contained a quantity of blood.

The pain was confined to the right side, and there was some puffiness over the iliac crest, but nothing could be felt on palpation. Urethra and bladder were apparently uninjured. He vomited at intervals for the first thirty-six hours, and could not retain the turpentine which was ordered. Twenty minims of turpentine were then given by the rectum, and the hæmorrhage ceased for two days.

On the morning of May 17 he passed a long wormlike clot about 6 inches in length, apparently a cast of the ureter, for the urethra was free.

May 19, 20, 21.—Blood was passed in the urine.

May 22.—What he passed consisted almost entirely of pure blood. The same character the next day.

May 24.—He complained of pain in the abdomen. Temperature 99° F. Forty-five ounces of almost pure blood had been passed in the previous twenty-four hours. The boy was very collapsed. Skin cold and damp. Pulse very frequent (140) and very weak. He had lost all colour in his face, which was pinched and drawn, and he was very restless. As the hæmorrhage was so profuse, and showed no signs of decreasing but rather the reverse, in spite of the turpentine and ice-bags to the side, it had become evident that he would sink unless the bleeding vessel was reached. Accordingly he was placed under chloroform, and a transverse incision made in the right loin parallel to the last rib and one inch below it.

[1] The specimen is in the museum of Sydney University.

When the peri-renal tissue was reached, it was found to be distended with blood clots.

The condition exposed was an extremely interesting one, for the layers of fine fasciæ which normally keep the peri-renal fat in layers were found to be thickened by inflammatory effusion. This had probably occurred in the first few days when he seemed to be recovering, but afterwards the blood had forced its way into the fat, so that there were three different layers of blood clot separated by fine fasciæ. The blood clot confined by the outer layer extended down the ureter to about the brim of the pelvis, tapering as it went down, and so surrounding the ureter that that tube could not be separated and tied off distinct from the kidney pedicle, as I usually do, without enlarging the wound. When these outside layers had been separated, the kidney itself in its capsule was quite clean, but it was divided completely into two halves by a rent passing from the hilus outwards.

The kidney was deeply furrowed at this part naturally, and the rent had exactly followed the furrow. Though part of the torn surface had made an attempt to granulate over, there was still free oozing from the part nearest to the hilus. With such a condition to deal with, and the knowledge gained of secondary hæmorrhage from a kidney that I once incised previously in a similar manner, together with the boy's general condition, I did not feel justified in simply plugging the wound, with the probability of profuse suppuration in the broken-down blood clot and the certain result of a urinary fistula. I, therefore, doubly ligatured the pedicle with silk and removed the kidney, inserted a drainage tube and closed the wound with catgut sutures. The boy was so exhausted at the end of the operation that before he was removed I injected 1½ oz. of brandy and 1 pint of saline solution into the rectum. The effect of this was very marked, and was ordered to be repeated during the day and night. He was also ordered haust. opii, 2 drachms every four hours if required. This I ventured to prescribe, as the patient was young and his other kidney probably healthy.

May 25.—He passed a fairly good night, but was vomiting frequently; temperature 102° F. Urine was passed involuntarily at short intervals, and was blood-stained.

May 26.—His temperature went up to 103·8° F. during the night, but fell to 101° F. by the morning. Pulse 140. Complained of slight pain in lower abdomen, but had not vomited during last twenty-four hours.

May 27.—Complained of pain in bladder and urethra, but passed 40 ozs. of dark bloody urine in twenty-four hours. Temperature 99° F Pulse 140. Several attacks of vomiting during the night.

May 28.—Wound discharge was septic and offensive with an urinary smell. It was surmised that it was caused by urine regurgitating from the end of the ureter

May 29.—Complained of pain over the bladder, which was distended. As he had passed very little urine, No. 5 catheter was passed but drew off no urine—the instrument was probably blocked by blood clot.

May 30.—Could pass no urine when on his back, but when turned on to his side he passed 42 ozs. in all, which contained large quantities of broken-down blood clot, although the catheter failed to withdraw any.

June 1.—Temperature at 6 a.m. was 103° F., but fell to 99·4° F. at 10 a.m. Pulse 140. Tongue furred. Fifty-two ozs. of dark porter-coloured urine with altered blood clot passed during last twenty-four hours.

June 2.—Pulse 152. Temperature 99·2° F. Passed 38 ozs. of urine, which was beginning to clear.

June 4.—Temperature had fallen to normal, urine was no longer blood-stained. Discharge from the wound less in quantity and not so offensive. From this time on he rapidly recovered, but the reaction of the urine was alkaline or neutral from a certain amount of cystitis, which very shortly cleared up after he had been taking pil. naphthalin ½ gr. for a day or so.

This case is interesting in various ways.

(1) That a normal kidney can be damaged by a patient falling flat on the face without any fracture of a rib, which was proved by both external and internal manipulation.

(2) The cast of the ureter is peculiar.

(3) The onset of secondary hæmorrhage, though the boy was then lying absolutely still with an ice-bag on and taking hæmostatics.

(4) The way in which the effused blood was bound by the peri-renal fasciæ.

(5) Whence came the blood in the bladder? Most probably the greater part had been effused before the operation, but the quantity passed was so large as to suggest the possibility of some source even after the operation. If so, was it from the end of the ureter? And did it come from the artery to the ureter, which may have escaped from the ligature, for I could not tie the ureter separately, as I usually do, or was there some unseen wound of the ureter also? Why should the blood have gone down into the bladder instead of coming by the wound?

(6) Was the early septic condition of the wound due to any regurgitation along the ureter? If so, that is another reason for putting a ligature on the ureter separately, even at the risk of enlarging the wound.

(7) It also shows the success of allowing the kidney to wash away blood clot for itself, and not wearing out the patient by attempts to wash it out, or suck it out, as mentioned by Buckston Browne.

(8) Putting aside the success of this particular case, should we content ourselves with plugging a wound of the kidney with the probability of perpetuating a urinary fistula, or put the patient to the greater risk of shock from the more serious operation, and the greater risks from intercurrent diseases in after life to an individual with only one kidney?

A CASE OF OBSTRUCTION OF THE COMMON BILE-DUCT.

By Stephen Paget, M.A.Oxon, F.R.C.S.

Surgeon to the West London Hospital; Surgeon to the Ear and Throat Department, Middlesex Hospital.

Mrs. D., aged 53, was sent to me by Dr. Ewens, of Maldon, Essex, and was admitted to the West London Hospital on September 8, 1898. From the history of her case I thought that she was suffering from malignant disease. Till four months ago she had enjoyed good health, and had never had any abdominal pain, or colic, or jaundice. She had borne eleven children, and had been "pretty healthy all her life." Her present illness began in May, with pain in the region of the gall-bladder, and jaundice. The pain was neither continuous nor severe; the jaundice got steadily worse, and at times she had attacks of sickness. She began to lose flesh, and eight days before she came to the hospital she became feverish, with severe rigors, and rapid loss of strength.

On Admission.—A feeble, emaciated woman, looking almost worn out by pain, fever, and want of sleep. Intensely jaundiced, almost as dark as mahogany; skin harsh, dry, and irritable. She had a rigor on the evening of admission, temperature 103·4° F., and her general condition was altogether unfavourable. The abdomen was tender all over, and slightly distended; and about the region of the gall-bladder there was an ill-defined deep hardness or resistance, but no evident tumour. The urine was almost black, and the fæces had been uncoloured for many weeks. It was plain that she was suffering from complete obstruction of the common bile-duct, with acute secondary inflammation and septic absorption; and, since she gave no history of any previous attack of pain or jaundice, it seemed most likely that she had malignant disease.

Operation, September 9.—Careful examination under ether failed to detect any tumour, only a vague hardness deep in the region of the gall-bladder. The abdomen was opened by a vertical incision through the edge of the right rectus abdominis muscle. There was no free fluid in the peritoneal cavity. The liver was of a dull slate colour, somewhat puckered or wrinkled, but showing no sign of malignant disease. The gall-bladder, with a few soft adhesions round it, lay very deep, being small and shrunken, wholly hidden beneath the liver, so that it could not be drawn forward. Having felt two small stones in it, I packed strips of gauze all round, and opened it and removed them. Then Mr. Ross, my house-surgeon, felt a somewhat larger stone in the common duct, slipping up and down in it; but we could neither work this stone back into the gall-bladder nor get a hold on it with the forceps, nor crush it within the duct; and over these attempts a good deal of time was spent, and the parts were somewhat roughly handled. At last I incised the duct and removed the stone, which was about the size of a small date-stone. Only a few drops of thick mucous fluid had come from the gall-bladder; but from the incision in the common duct there flowed about two drachms of thin pale purulent fluid, just stained with bile. I did not suture the duct, but drew the parts forward as well as I could, and shut off the general peritoneal cavity with half-a-dozen long strips of gauze, and packed the whole wound with gauze and a small sponge, and closed only the upper angle of it with a few sutures.

Result.—The temperature fell next day below normal, and never rose again above 99·6° F. The gauze packed around and in the cavity was removed during the first week. The wound was very large and deep, and was dressed and packed daily; it remained shut off from the general peritoneal cavity, and slowly became lined with healthy granulation-tissue. No bile escaped from it till a fortnight after the operation, and then, for three or four days, the dressings were soaked with bile. The same thing happened again about a week later, but lasted only a day or two. After this the cavity filled up, and the patient left the hospital on October 15 in fair health, but still somewhat jaundiced. In November, Dr. Ewens wrote that she was doing well.

Remarks.—The history of this case led us to expect malignant disease rather than gall-stones. At the operation the shrunken deep-fixed gall-bladder was the cause of much difficulty. The jaundice was intense, and it had not all gone even when the patient left the hospital, many weeks after the urine and the fæces had become normal. I have advised her henceforth to

avoid fatty foods, to drink an abundance of fluids, and to take some saline, such as Carlsbad salts. At the operation, it would have been better, before incising the duct, to pass sutures through it where the incision was to come, and then tie them after the stone had been removed. The long strips of gauze were thrust in every direction into the cavity and among the intestines; the whole region was packed, and kept packed, with gauze and sponge. I have used this method in my last five cases of intra-peritoneal abscess round the vermiform appendix, and they have all recovered: it is far safer than the use of a drainage-tube.

Reviews and Notices of Books.

MANSELL-MOULLIN ON THE TREATMENT OF SARCOMA AND CARCINOMA BY INJECTIONS OF MIXED TOXINS.[1]

THIS little book, which is an expansion of a paper read before the Harveian Society, contains the author's experience of the treatment of sarcoma with Coley's fluid. He has added four appendices: the first containing a list of recorded cases of advanced sarcoma, which had been cured by accidental attacks of erysipelas. In the second appendix, there is a list of cases of sarcoma and carcinoma in which erysipelas had been caused intentionally; in the third there is a list of published cases in which Coley's fluid had been employed in the treatment of advanced sarcoma and carcinoma; and in the fourth, he gives a report of conditions other than malignant disease which had been treated by the same method. This group includes cases of lupus, syphilis and keloid. The author gives a full account of the method of preparing the fluid for injection. It is briefly as follows:—Ordinary peptonised bouillon is inoculated with the streptococci of erysipelas, and the culture is allowed to grow for three weeks at a temperature of from 30° to 35° C. It is then inoculated with the bacillus prodigiosus, and the cultures allowed to grow for another ten or twelve days. At the end of that time the cultures are heated to a temperature of 50°

[1] "The Treatment of Sarcoma and Carcinoma by Injections of Mixed Toxins," by C. Mansell-Moullin, M.D.Oxon, F.R.C.S., Surgeon and Lecturer on Surgery at the London Hospital; Examiner in Surgery at the University of Oxford. London: John Bale, Sons, & Danielsson, Ltd., 1898.

or 60° C. for an hour, which is sufficient to render them perfectly sterile. After cooling, a little powdered thymol is added as a preservative, and the toxins are ready for use. The dose should be only one minim at first, but this may gradually be increased till five or even eight minims are injected.

The hopelessness of any form of treatment in inoperable cases of malignant disease has drawn considerable attention to Coley's fluid, the use of which in the hands of its introducer has been followed by a cure in a certain number of cases. Curiously enough, in the hands of other surgeons in America and in this country, equally good results have not been obtained. Thus Coley had treated 90 cases, 33 of which improved, and 13 of these were apparently cured for a time, but only 9 remained free from recurrence; there was no effect in 45 cases, and 3 died. Friedrich treated 19 cases, Spronk 25 cases, Rêpin 4 cases, Butlin 3 cases, Senn 9 cases, all without any good effect, while only a few isolated cases of supposed cure have been recorded by other observers. The author has employed the injections in 10 cases: 2 of these died in consequence of the injections, 3 were unaffected, and 5 improved; of the 5 he claims that 3 were cured; of the remaining 2, in 1 the original tumour disappeared but other secondary tumours developed, and in the other no improvement occurred, although at one time the tumour appeared to begin to decrease. Of the 3 cases claimed to be cured, it must be noted that the diagnosis in all of them is open to some doubt, since no microscopic examination was made at any time. Two of the cases were swellings in the region of the groin accompanied by enlarged glands, and occurring after some injury, the third case was an intra-abdominal tumour. Under these circumstances we cannot say for certain that Coley's fluid has cured sarcoma in Mr. Moullin's hands. His mortality of 20 per cent. is also rather high. Coley's statistics, however, are more satisfactory, since a microscopic examination was made in all the cases; by these means it was found that the spindle-celled sarcoma was the only one which was much affected by the injections; of the round-celled cases only 2 out of 50 improved, and all the melanotic cases were failures. Even in the hands of Coley, only 9 cases, or 10 per cent. were permanently cured, this percentage of cures being only half the percentage of deaths obtained by Mr. Moullin, namely 20 per cent. At the present time there is rather a strong feeling against this treatment in America, and the New York Surgical Society has reported on it adversely. Mr. Moullin, however, seems inclined to recommend the injections in all cases of inoperable sarcoma, and points out

that even in cases which were not cured, the patients often increased in weight and strength under the treatment.

Our experience of this method of treatment has been limited to 3 cases, 2 of which were sarcomata, and 1 was a carcinoma; in no case was there the slightest improvement. In 1 case, that of multiple sarcomata of the skin, on several occasions after the injections the patient suffered from twitching of the face, and as no effect had been produced on the tumours after two months' treatment, the injections were discontinued. We strongly recommend that, in all cases before commencing treatment by injections of Coley's fluid, a microscopic examination of the tumour should be made. If the growth prove to be a spindle-celled sarcoma, Coley's fluid may be employed with some hope of success, but if it prove to be a round-celled or melanotic sarcoma, or a carcinoma, the treatment affords but little hope of any benefit resulting, and involves at the same time a very considerable immediate risk to life.

PAGET'S ESSAYS FOR STUDENTS.[1]

THESE consist of four essays on the following subjects:—Strangulated Hernia, Cancer of the Breast, Some Run-over Cases, and Elements of Aural Surgery. Each essay is the record of the author's own experience of actual cases, and is therefore of the greatest interest. It were well if other surgeons would perhaps more frequently describe faithfully and fearlessly the account of a series of cases, in a manner similar to that which Mr. Paget has done. The essay on Strangulated Hernia is a peculiarly interesting and instructive one. Reviewing the previous history of fifty cases, the author sums up that five out of every six cases knew previously that they were the subjects of hernia, and that three of these five had had repeated warnings of the danger that they were running.

Mr. Paget's *résumé* of the signs and symptoms present in these patients is very well depicted, and goes to show how very variable they may be.

In speaking of the question as to whether an impulse may be noted in the sac of a strangulated hernia, Mr. Paget fails to make a distinction between an "expansile" impulse and a "forward" impulse. The former is very seldom present in a

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[1] "Essays for Students," by Stephen Paget, M.A.Oxon., F.R.C.S., Surgeon to the West London Hospital; Surgeon to the Ear and Throat Department, Middlesex Hospital. London: Bailliere, Tindall and Cox, 1899.

truly strangulated hernia, but the latter is by no means infrequently in evidence, and merely indicates that the contents of a large sac are pushed forward by the action of the abdominal walls in coughing. It is well that this "forward" impulse should not in any case delay the necessary herniotomy.

In speaking of the contents of the sac, Mr. Paget gives a good account of the various qualities of the fluid which may be found within, but he does not allude to its almost constant admixture with bacteria.

Six cases of strangulated herniæ in infants which necessitated operation for the relief of strangulation are recorded. It will doubtless be considered by many surgeons that this is a somewhat large number, seeing that strangulation in children of such tender years but very seldom needs herniotomy for the stricture. The question is raised by the author as to whether operation was the treatment that should have been adopted, but he does not answer it with the clearness that he is so-wont to employ. The discussion of the methods of operating is good, especially where free exposure of the seat of stricture is recommended. The after-treatment is dealt with in an excellent manner, though but few perhaps will agree that opium is the best drug to remove the cause of flatulency, though it may relieve the pain. Strychnine has in such cases been found of the greatest service.

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The next essay is on cancer of the breast. The author is perhaps unhappy in giving this heading to the paper, for the less a student employs this word, the less liability will there be of his using it at untoward times. This, however, does not detract from the great value of the essay. It is again a record of facts, and can therefore hardly fail to command interest. The diagnosis of carcinoma is well discussed, and the methods of examination are clearly set forth. Mr. Paget advocates a very free exposure of the contents of the axilla with a view to their removal. No drainage should be employed, "the more extensive the operation, the less reason for drainage."

"Some Run-over Cases," truly seem to form a class of themselves. This essay can be recommended not only to students, but to surgeons, and even those of experience. Space will not permit of a full review of it. The author discusses the origin of the meteorism that not infrequently occurs after a run-over the abdomen, but he does not allude to the fact that simple want of peristaltic movement may of itself lead to much formation of gas in the bowel. The instances of voracious appetite that has been present in some of the author's patients are very interesting. The last essay on

"Elements of Aural Surgery" will well repay perusal, for in it are numerous practical hints which are clearly the outcome of careful observation.

It need only be added that the Essays are charmingly written, and that the students of Middlesex Hospital, to whom they are dedicated, are to be congratulated upon having a teacher like Mr. Paget who can place his knowledge before them in so attractive and fascinating a form.

THE LIBRARY REPORT.

THE staff of the hospital have just provided, out of the fees received for post-graduate tuition, a sum of money with which to purchase a carpet for that part of the top ward in which the books are placed, as well as a new table for the journals. Members wishing to take out books are requested, in the absence of the Hon. Librarian, to apply to Martin, the porter in charge. Now the books are so perfectly accessible, it is hoped that members of the Society will take some pleasure in adding to their number. It is to be hoped also that the cost of the carpet and new table will be only the first of many contributions from the post-graduate fund to the Library. Of course all post-graduates who join the Society have the use of the Library. And it may be pointed out that the adjacent "Reading and Writing Room" is open to all members of the Society.

The subscription to the Book Club in connection with Lewis's is 11s. 6d. THE HON. LIBRARIAN.

BOOKS RECEIVED.

On the Study of the Hand for Indications of Local and General Disease, by Edward Blake, M.D. London: Henry J. Glaisher, and John Bale, Sons and Danielsson, Limited. [NO DATE.]

Drs. Harvey and Davidson's Syllabus of Materia Medica, revised in accordance with the British Pharmacopœia, 1898. By William Martingdale, F.L.S., F.C.A. Tenth Edition. London: H. K. Lewis, 1898.

The Treatment of Sarcoma and Carcinoma by Injections of Mixed Toxins, by C. Mansell-Moullin, M.D., F.R.C.S., Surgeon and Lecturer on Surgery at the London Hospital. London: John Bale, Sons and Danielsson, Limited, 1898.

Essays for Students, by Stephen Paget, F.R.C.S., Surgeon to the West London Hospital; Surgeon to the Ear and Throat Department of the Middlesex Hospital. London: Bailliere, Tindall and Cox, 1899.

A Guide to the Examinations by the Conjoint Examining Board in England, and for the Diploma of Fellow of the Royal College of Surgeons of England. By Frederick James Gant, F.R.C.S. Seventh Edition, revised throughout by Willmott Evans, M.D., B.Sc.Lond., F.R.C.S. London: Bailliere, Tindall and Cox, 1899.

St. Bartholomew's Hospital Reports, edited by Norman Moore, M.D., and W. J. Walsham, F.R.C.S., vol. xxxiii. London: Smith, Elder and Co., 1899.

On So-called Spasmodic Asthma, considered from an entirely new standpoint with regard to its radical cure. By Ernest Kingscote, M.B., C.M., L.R.C.S.Edin. London: Henry J. Glaisher, 1899.

LIST OF MEMBERS ELECTED DURING THE PAST QUARTER.

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Miscellaneous Extracts.

REPEATED ECTOPIC PREGNANCY AND OPERATION IN THE SAME PATIENT.—In the *Zeitschrift f. Geburtshülfe und Gynäkologie*, 1898, band xxxviii., heft 2, Falk reports the case of a woman, aged 29 years, who, seven years before, had a normal labour followed by a normal recovery. After menstruation had ceased for two months she had bleeding for six days, but passed no membrane. She complained of pain in the sacral region and weakness. On examination an elastic tumour was found behind the uterus, and a few days afterwards the patient had a sudden attack of syncope. On abdominal section pregnancy was found in the right tube, which was removed. The patient made a good recovery. Three years later she returned to the clinic in a very anæmic condition. There were dulness over the abdomen and a tumour behind the uterus, which was elastic. The history was given that the patient had ceased menstruation for several months, and that while milking she was suddenly taken with collapse. She took strong purgatives, which further reduced her strength. On opening the abdomen the left tube was found pregnant and ruptured. Considerable blood had escaped behind the uterus. The tube and ovum were removed, the pelvis emptied and drained, and the patient made a good recovery.—*The American Journal of the Medical Sciences*, August, 1898.

THE BEST FORM OF MERCURIAL INUNCTION CURE.—Unna (*Monatshefte für prakt. Dermatologie*, January 15, 1898) calls attention to the fact that the use of "mercury-salve soaps" for the purpose of inunction is not new, as claimed by some, but has been employed by him uninterruptedly since 1884. He considers that this method is more agreeable and convenient to patients than that of mercurial ointment, and that from the physician's standpoint it acts energetically upon all varieties of syphilitic lesions, and more rapidly than mercurial ointment. Further, that mercurial ointment is rubbed in satisfactorily only in subjects with a markedly fatty skin, while the "mercurial-ointment soap" is well adapted to all conditions, acting more energetically and surer upon deep-seated local lesions than mercurial ointment, and that it is particularly indicated in glandular swellings and bone affections. The "gray soap" (*sapo cinereus*) recommended contains, as in the case of all "ointment-soaps," a cooked potash solution and fat, with 5 per cent. benzoinated fat superadded to the body of the soap, with which is incorporated half its weight of quicksilver. For an active course of inunction about a drachm is used daily; for a mild course from fifteen to thirty grains. The application is allowed to remain on the skin about a week. It does not stain the linen appreciably.—*The American Journal of the Medical Sciences*, August, 1898.

RHEUMATOID ARTHRITIS.—Prof. James Stewart, of McGill University (*Montreal Medical Journal*) considers the relation of rheumatoid arthritis to diseases of the nervous system, tuberculosis, and rheumatism, and arrives at the following conclusions:—"(1) Rheumatoid arthritis is a disease prone to occur in people of a rheumatic tendency who have suffered from subacute rheumatic attacks. The presence of infectious disease of any kind tends to increase this tendency, as does also the operation of all causes having a depressing influence on the resisting power of the nervous system—worry, exposure, or cold, and traumatism. (2) There is no sharp dividing line between certain cases of chronic rheumatism and the earlier stages of rheumatoid arthritis. (3) There is not sufficient evidence to support the views commonly held as to the nervous origin of rheumatoid arthritis. (4) The polyarticular forms of rheumatoid arthritis have clinically the features of an infectious disease. (5) The result of recent investigations points very strongly to its infectious nature. As regards treatment, the most valuable and most successful method is the employment of superheated dry air, according to Tallerman. The author has employed this method in twenty cases, with very gratifying results."

ALCOHOL AS A DISINFECTANT.—Goemer (*Centralblatt f. Gynäkologie*, 1898, No. 18) gives a report of the results of his experiments which were carried on to determine the practical value of alcohol as an antiseptic. The experiments were conducted by cleansing the hands in various ways with alcohol, and then inoculating animals with material removed from beneath the nails. The result showed that alcohol is inferior to bichloride of mercury as an antiseptic. Streptococci and other active germs, and also spores of bacteria, are not affected. The author advises the use of alcohol in connection with thorough washing with soap and hot water, and brushing in bichloride of mercury.

THE TREATMENT OF CONSTIPATION.—Dr. Albert Robin recommends sodium sulphate not only for its laxative properties, but because it relatively is peptogenic—seventy-five to one hundred and fifty grains in a half-glass of water during the meal. Magnesium hydrate if used for a long time is likely to irritate the bowels, cause colicky crises, and favour abnormal intestinal fermentation with increase of indican in the urine. Finally, it is strongly alkaline and may give rise to considerable magnesium carbonate, which may irritate the bladder. In spite of the usual repugnance to drastic cathartics, pills of aloes or of aloes and cinchona are useful. Socotrine aloes should not be specified, for none are to be found in commerce. Massage, which has for its purpose the emptying the large intestines, merits further use. Of the mineral waters, Châtel-Guyon, Brides, Aulus (source Darmagnac) are preferred. As for diet, it is important to note that many patients pass albumin in their urine two or three hours after eating, but not at other times. Therefore the amount of proteids should be limited to that which can be thoroughly oxidised.—*Bulletin Général de Thérapeutique*, 1898, xvie liv., p. 593.

THE ABSORPTION OF SALT SOLUTION THROUGH THE RECTUM.—Eltz (*Therap. Monatshefte*, September, 1898) advocates the use of salt solutions in rectal injections in order to relieve thirst in cases in which water cannot be administered by the mouth. In a case of eclampsia after absorption, the patient's teeth being spasmodically closed, he found it of advantage to administer large quantities of salt solution in this manner. The fluid was absorbed, producing an abundant perspiration and flow of water through the kidneys. His experience with this method of treatment is limited, but thus far good results have followed its use, and he is inclined to think that it will be found helpful in any

acute attack of nephritis associated with œdema. From a pint to a pint and a half of the solution may be given at one time, and be entirely absorbed. In cases of severe hæmorrhage and repeated vomiting the benefit of this treatment is obvious. It also increases the diaphoretic action of other remedies.

THE TREATMENT OF ANCHYLOSIS OF THE JAW.—Roser (*Cent. f. Chir.*, 1898, No. 5) reports a successful case in which he employed a method which he devised for the prevention of a recurrent anchylosis. After an excision of the articular surfaces of the lower jaw he interposed a thin sheet of gold moulded to fit the joint in a measure, and thus, while helping to hold the parts in position, it prevented the formation of a bony or fibrous union. The method of interposing portions of muscular structures has been employed by others, but the use of metal for this purpose, the author believes, has distinct advantages. The result in this case was eminently successful, the patient retaining the original amount of motion attained. The author believes this method of interposing a foreign substance may be readily applied to other joints in the production of artificial arthroses.

TREPHINING THE SKULL.—The various means now in vogue for trephining, and the different processes by which large bone and skin flaps are raised in modern operations on brain tumours, are discussed at length by Braatz (*Cent. f. Chir.*, 1898, No. 3). He believes that the best method is by the use of Gigli's wire saw, which is passed between the dura mater and the bone, through small trephine openings or drill holes which are placed at convenient intervals in the line of the flap which is to be removed. The perforations through the skull, he believes, can be more readily made by employing a simple mechanical drill which he has devised for this purpose than by the use of trephines or ordinary drills. The use of the Gigli saw has the advantage of destroying only a small amount of bone substance, so that, if it is desired, the bone flap can be replaced. By making the cuts slightly bevelled the bone is prevented from pressing on the brain, while thin bone periosteal flaps may be made that will lap over the cut-out point, and thus securely close it.

THE TREATMENT OF GONORRHŒAL INFECTION OF JOINTS AND TENDONS.—Nasse (*Centralbl. für Krank. Harn-und-Sexual-Organe*, September, 1898) has had an extensive experience in the treatment of gonorrhœal infection of joints and tendon-sheaths. He recommends rest with compression, to be followed by a stiff bandage—either starch or plaster of Paris. Puncture of the capsule, with irrigation, is only to be

adopted in chronic cases marked by recurrences. Fixation must not be too long continued. It should be followed by passive motion and massage. Hot bathing is also helpful, and injections of iodoform may be used. In very bad cases arthrotomy has to be considered. The writer places no reliance upon internal medical treatment.

NOTES ON NEW PREPARATIONS, &c.

Creasotal, Duotal and Heroin.—Elberfeld Farben Fabriken & Co., Ltd. We have received samples of the three preparations here named. **Creasotal** is the carbonate of creasote. It is prepared so that the resulting mixture is of a perfect brilliancy and of only a slightly bitter taste. At times there is a tendency for the liquid to lose its clearness, but heating to a temperature of 210° F. will readily restore its original freedom from cloudiness. **Duotal** is the carbonate of guaiacol, and a solid. It is quite inodorous, and easily soluble in water. Both of these preparations have been found to be of the greatest value in the medicinal treatment of pulmonary tuberculosis, and as they have but little tendency to interfere with the process of digestion, they are in all ways suitable for internal administration. **Heroin** is of the nature of a compound of morphine, and appears to have the advantage that it does not possess any of the disagreeable after-effects that are so often found with morphine itself. It is, however, not soluble in water, and has therefore to be administered in the form of a powder mixed with some sugar.

Messrs. Burroughs, Wellcome & Company have informed us that a most interesting "**Tabloid**" **Medicine Chest** has lately been returned to them by an officer of the Congo Free State, who recovered it from natives near Kenia in the Aruwhimi Dwarf Country. This chest formed the last medical equipment to Emin Pasha, Gordon's Governor of the Equatorial Sudan, and was supplied to him just before he started on his last expedition to Central Africa. The case accompanied him throughout his subsequent travels and was taken by Arabs after his massacre at Kibungi, in October of 1892. After passing through many adventures it was recaptured by Baron Dhanis, Commandant of the Congo Free State troops after the battle of Kasongo, in which the Congo Arabs were defeated. Emin Pasha's journal and a quantity of his property was recovered at the same time, but the "tabloid" compressed drugs, which had been in the chest were found to

have been removed. The chest was subsequently stolen by natives, and before its final recovery was used as a village treasury chest.

Clinical Thermometers.—Maw, Son & Thompson. The clinical thermometers that are supplied by this firm are of well-known correctness and durability. One that has been in our possession for over six years, and has been constantly used, is still in a state of excellent preservation.

"Izal" Soap, Cream, Ointment, Tooth Powder, Oil.—Newton, Chambers & Co., Ltd. We have received samples of these "Izal" preparations and have put them to an actual test. We can specially recommend the soaps, both toilet and medical, and would suggest that the former might be used with great advantage as a shaving medium. The "Izal" cream appears to be a particularly valuable application at the present moment for chapped hands, giving rise to no irritation, and at the same time leading to rapid recovery.

"Izal" oil. This is a preparation which is a strong antiseptic, and in the proportion of 1 in 20 is a suitable treatment for ringworm, causing no blistering, and being of more general use than formalin in such instances. The "Izal" antiseptic dressings are reliable and may be obtained from the manufacturers, Messrs. Gibbs, Cuxson & Co., Oldbury.

Invalid Transport. St. John's Ambulance Association. It not infrequently happens that a medical man is questioned as to the best means for the transport of invalids, convalescents, or those needing removal to hospitals. We cannot do better in such cases than to recommend the "Invalid Transport Corps" of the St. John's Ambulance Association. This service is excellent, and the charges are by no means heavy. Infectious cases are never conveyed, so that there is no risk of infection. A telegram to "Firstaid, London" will always secure prompt attention.

Petroleum Emulsion.—Angier Chemical Co., Ltd.—Sometime ago the Angier Chemical Company sent us samples of their petroleum emulsion, asking us to give it a trial. This we have now done, and in every case we have found it to act most satisfactorily. It is a thick white liquid of the consistency of rich cream, and with only a very slightly oily taste. It has proved to be easily borne in cases of infantile wasting with irritable stomach, and has effected a rapid improvement in the gastric symptoms and in the general nutrition. We have found it especially valuable in hot weather when it has

been impossible to prescribe cod-liver oil, and can conscientiously recommend it as a welcome addition to our armamentarium for combating wasting diseases, accompanied, as they so often are, by gastro-intestinal irritability.

NOTES AND NEWS.

WITH the present number the WEST LONDON MEDICAL JOURNAL celebrates its fourth birthday. The event is one worthy of mention, if only for the purpose of showing that the enterprise of the Society in founding a JOURNAL of its own in 1896 has been quite justified by the result. When the JOURNAL was started the membership of the Society was exactly 368. At the present time the members' list numbers 532. Such progress within the short period of three years tells its own tale, and calls for no further comment.

THE Annual Dinner of the Society has been fixed by the Council to take place on Wednesday, February 8, at the Trocadero Restaurant. The intention has been carried out this year of completing the arrangements as early as possible, in order to allow of the invitations to the distinguished guests being issued in good time, so as to avoid clashing with similar engagements. In this auspicious year, it is hoped that we shall have a record attendance, both of guests as well as of members. Perhaps with a little persuasion the Council might be induced to pass a resolution to the effect, "That the public are informed that no confinements will be allowed to take place within the district of the Society between the hours of 6 p.m. and midnight on Wednesday, February 8." By this means a large number of the members would be able to attend the dinner in peace, and enjoy themselves. I hope that I may be able to say in the April number of the JOURNAL that the attendance numbered at least 150, *exclusive* of guests.

THE Society generally will be interested to learn that the attendance of the members at the meetings during the past quarter far surpassed all previous records. This is highly gratifying, but it is not surprising, for the fact is simply another declaration that the wave of prosperity of the Society is still continuing its upward course.

QUITE possibly part of the largely augmented attendance is due to the comfort of the Society's Room. Seventy members

and more can be accommodated at the meetings without inconvenience of any kind. The ventilation is perfect, the lighting good, a comfortable temperature is maintained, and the acoustic properties of the room call for no complaint. In short, the Society in this respect, has never been so comfortably situated, and it would seem that the members have ascertained for themselves that this is the case.

But furniture, carpets, and household effects cannot be obtained for nothing, and I am therefore desired by our excellent Treasurer (Mr. Gunton Alderton, 82, The Grove, Hammersmith) to point out that the expenditure upon these has greatly reduced the Society's balance. In order, then, to restore the balance at the bank, he hopes that those members who have not already paid their subscriptions will kindly do so without delay.

The members of the Society will learn with regret that one of our past Presidents, Dr. F. H. Alderson, has left the neighbourhood, having disposed of his practice, and moved to Bournemouth. Dr. Alderson occupied the Presidential chair in the year 1886-1887, the year in which I had the honour of being the senior Secretary. Both to the Society as well as to the West London Hospital Dr. Alderson has proved himself a valuable friend and supporter; as one of the original members of the Society he has always done his utmost to promote its success; mainly through his advocacy many members have joined who otherwise, perhaps, would not have thought of doing so. Therefore I do not doubt that I am merely echoing the sentiment of the members generally in expressing the hope that he will continue to keep up his connection with us and maintain that interest in the Society which he has ever evinced.

Colonel E. H. Fenn, R.A.M.C., who has been appointed surgeon on the Staff of the new Viceroy of India, was a member of the West London Post-Graduate class in 1897, during which time he was a most regular attendant in the wards and out-patient rooms. I am sure that all those who then had the pleasure of meeting Colonel Fenn will be heartily glad to hear of the honour which has been conferred upon him.

The announcement by the President at the December meeting of the Society that Dr. Ostler, Professor of Medicine at the Johns Hopkins University, Baltimore, had consented to

deliver the next Cavendish Lecture, was received with acclamation. The Council are to be congratulated upon having secured the services of so distinguished a representative of the profession across the Atlantic. In glancing at the list of former Cavendish Lecturers, it is seen that all save three were representatives of the profession in London, the exceptions being in favour of Dublin twice, and Aberdeen once. Professor Ostler is a Canadian, and previously to accepting his present appointment he held for many years a similar post at the Toronto University. In recognition of his high scientific attainments the honour of the Fellowship of the Royal Society was conferred upon him last year, and he has also been elected a Fellow of the Royal College of Physicians, London.

THE date of the Cavendish Lecture has been fixed for Friday, June 16, and after the delivery of the Lecture the Annual Conversazione will take place. Further it is in contemplation to invite Professor Ostler to be the distinguished guest at the Past and Present West London Hospital Dinner, the date of which, still to be determined, will probably be towards the end of June.

ON Wednesday, October 19, the Cavendish Lodge (2,620) entered upon its third year of existence, upon which occasion Bro. Symons Eccles was duly installed the Worshipful Master for the ensuing twelve months. The following officers were afterwards invested :—Bro. Herbert J. Menzies, Treasurer; Bro. W. H. Causton, P.M., Secretary; Bro. J. D. Mortimer, S.W.; Bro. L. A. Bidwell, J.W.; Bro. Percy Dunn, S.D.; Bro. C. G. Cathcart, J.D.; Bro. Tuke, I.G.: Bro. Handfield Jones, Steward. Bros. Lowe and Lloyd Williams were raised to the third degree, and Mr. Warham St. Leger was admitted into Freemasonry. The Brethren and their guests subsequently dined together, several grand officers being present, and during the evening songs were contributed by Bros. W. Nichol and Frankline Clive, and other Brethren.

I MAY here remind the members of the Society that the February meeting will be devoted to a discussion on "The treatment, medical and surgical, of acute inflammation of the vermiform appendix." There is every probability of the discussion proving interesting and important, and not by any means least on account of the "local colouring" which is likely to be imparted into it—that is to say, two members, if not more,

will be present and give their personal experience of attacks of appendicitis from which they have suffered and recovered. It is generally known that my colleague, the editorial secretary, was unfortunate enough to develop an attack of the disease, just after he had started for his holiday last summer. Coming back to town, however, at once, he was soon afterwards successfully operated upon, and I am pleased to record his assurance that, since then, he has quite recovered his usual good health.

THE West London Post-Graduate College commenced a new session last October under the most encouraging auspices. The classes were joined by thirty-five members, consisting of qualified practitioners, one lady, and two fifth-year medical students. The demonstrations in the wards and the lectures were very well attended, and the out-patient rooms, where much of the teaching is done, were often crowded. The inconveniences, however, of the out-patient department are becoming so great an evil that some steps will have to be taken to remedy the existing state of things. In the past the staff have tolerated the difficulties with which they have had to contend in attending to the patients, but now that the latter have, from the great increase in their numbers, quite outgrown the accommodation provided, the predominant feeling is, that the enlargement of the out-patient premises has become an imperative necessity.

As a ceremonial the opening of the two wards in the new wing by H.R.H. the Princess Louise and the Marquis of Lorne, on December 7, last, was most successful; unfortunately, however, from a financial point of view it proved quite a failure. Despite the presence of royalty, vigorous advertising, and the stirring speech of the Duke of Devonshire, the whole proceeds amounted to only £222. The meagreness of the sum is surprising. Well-wishers to the hospital will trust that it does not portend the advent of a financial crisis in the affairs of the charity.

THE great pressure upon the space of the JOURNAL has compelled me to withhold the publication in this number of a "West London Post-Graduate Lecture." The report of the proceedings, it will be noticed, are unusually lengthy—a good sign; and eight pages of the JOURNAL are taken up with the publication of the Society's Laws.

THE West London Hospital last month received a sum of £1,050 from the estate of the late Mr. Woolf Joel.

AMONG the deaths of distinguished medical men which took place during the year just closed, that of Sir William Jenner will perhaps be regarded as the most noteworthy. Sir William passed quietly away last month, full of years and honours, at his residence near Bishops Waltham, Hants. As was generally known, he had for many years enjoyed the confidence and friendship of his Sovereign, and the Queen, after having been informed of his death, caused an announcement to be inserted in the *Court Circular* expressive of her deep regret on hearing of his decease, and in gracious and sympathetic terms referred to her loss of an able physician and a trusted adviser. Sir William was an honorary member of our Society, and it is therefore probable that the Society will be called upon to pass a resolution of sympathy and condolence with Lady Jenner and the family, at the next meeting.

A SAD incident occurred at the West London Hospital on Friday, December 9. A gentleman had just left the Broadway station, after his return from the City in the evening, when he was seen to stagger, and before assistance could reach him he fell heavily to the ground. As soon as possible he was conveyed to the hospital, and it so happened that at the time several members of the staff were just leaving after having attended a meeting of the Medical Council. Some waited while the gentleman was being carried into the Casualty Room, and then they at once became aware of the sad fact that the gentleman in question was Mr. J. C. Leaver, a valued member of the Committee of Management, and that he was dead. The news of his death, as it became known, called forth universal expressions of deep regret. So far as the staff are concerned, they have lost a good friend in Mr. Leaver; he was always anxious to be helpful, and to give them his support in all their undertakings which he believed to be for the good of the hospital. His long connection with the work of the institution, in which he took a deep interest, enabled him to gauge very accurately the right policy to pursue in the promotion of its interests, and thus it was that the staff came to regard him as a firm and trustful friend. Whenever the occasion arose for his valued assistance, they never found that their confidence or trust in him were misplaced; and I am sure that I must be merely expressing the

conviction of the majority of those having the interests of the Hospital at heart in asserting that it will be a difficult matter to find a worthy successor to the vacancy on the Committee of Management created by the death of Mr. Leaver.

Notice.—All communications relating to the literary part of the JOURNAL, *books for review and exchanges, should be addressed to the Editor, 54, Wimpole Street, Cavendish Square, W. Applications for copies of the* JOURNAL, *communications respecting advertisements, instruments, pharmaceutical preparations, &c., intended for notice, should be forwarded to the Editorial Secretary, 124, Harley Street, Cavendish Square, W.*

CADBURY'S

COCOA.

"The standard of highest purity."—*The Lancet.*

Entirely free from admixtures, such as Kola, Malt, Hops, &c. No Alkali used to darken the colour.

When asking for Cocoa insist on having CADBURY'S—sold only in Packets and Tins—as other Cocoas are often substituted for the sake of extra profit.

LAWS

OF THE

West London Medico-Chirurgical Society.

CONSTITUTION OF THE SOCIETY.

1.—The Society shall consist of honorary, subscribing and corresponding Members.

2.—Subscribing Members must be duly registered Medical Men, but no one shall be a member or eligible for election as such who is practising as a Homœopath, or engaged in carrying on, or assisting in carrying on, any form of irregular practice, or who is resorting to any methods for procuring patients or practice which are derogatory to the practice of Medicine, Surgery or Obstetrics as a profession.

And the Council shall have power at any time to remove from the Roll of the Society the name of any Member who shall be proved to have transgressed, or be transgressing this law.

Honorary Members shall be persons distinguished as cultivators of medical, surgical or allied sciences, or who have promoted the welfare of the Society, and they shall be exempt from all contributions.

Corresponding Members while resident out of the United Kingdom shall also be exempt from contributions, but shall become subject to the rules relating to subscribing Members when residing within the Kingdom, or when receiving the Society's Journal.

3.—The affairs of the Society shall be conducted by a President, the Honorary Vice-Presidents elected under Law 11, four Vice-Presidents, a Treasurer, a Librarian, two Secretaries, the Editor, the Editorial Secretary of the Journal, and twelve other Members, who shall together constitute a Council, and all of whom shall be elected from the subscribing members, and enter upon office on the first of October next following their election.

ELECTION & ADMISSION OF MEMBERS.

4.—All elections shall be by ballot at the Society's meetings, and the votes of three-fourths of the members voting shall be necessary to the validity of an election.

5.—Any candidate for admission as a member shall be proposed in writing by two or more subscribing members (who have personal knowledge of him) at an ordinary meeting of the Society. The proposal shall be read out by the President, recorded in the minutes, and the ballot for election shall take place at the next ordinary meeting.

6.—No candidate having been unsuccessful at the ballot shall be eligible for re-nomination within six months.

ELECTION OF OFFICERS.

7.—All officers of the Society shall be elected annually by ballot, at the annual (general) meeting to be held at the end of the session on a day to be appointed by the Council.

8.—The balloting lists shall be prepared by the Council and distributed among the members at least one week previous to the meeting.

9.—Before proceeding to the election, two scrutineers shall be appointed to superintend the ballot and examine the lists.

PRESIDENT.

10.—The President shall be elected for one year, and shall not be eligible for re-election to that office until after an interval of two years following his vacation of the chair.

VICE-PRESIDENTS.

11.—The Ex-Presidents of the Society shall be Honorary Vice-Presidents, and the last six shall be ex-officio members of the Council.

12.—Of the four Vice-Presidents two shall retire from office every year in order of seniority by rotation.

TREASURER.

13.—The Treasurer shall have a book of printed receipts for the contributions of members. He shall have the charge of the funds of the Society, and receive all sums due to it, but he shall not pay any bills or accounts against the Society without the sanction of the Council under the signature of its chairman. He shall make up and balance the accounts of the Society for each year, ending on June 1st, showing the receipts, payments, and liabilities. It shall be within the power of the Council to authorise the Treasurer to appoint a collector, on terms decided by the Council, to assist him in his duties.

14.—Two Auditors shall be appointed by the annual meeting from the members not in office to examine the vouchers and accounts of the Treasurer, and certify to their accuracy, and a copy of the balance sheet so audited shall be forwarded to each member with the notice convening the annual general meeting.

SECRETARIES.

15.—The Secretaries shall attend all meetings of the Society, Council, and committees, take minutes and record all transactions and proceedings, and conduct the correspondence of the Society. They shall read the minutes

at the commencement of the meetings, and likewise any letters or reports which may have been received. They shall prepare lists of donations, contributions, &c., and of the names of candidates for admission to be read out by the President as prescribed in Law 5, inform Members of their election, forwarding to each a copy of the Laws; they shall call upon all members reading papers to furnish them with abstracts of their communications, and shall prepare under the authority of the Council the annual report.

COUNCIL.

16.—The Council shall regulate the business of the Society, receive and order for payment all bills, examine accounts, and control the expenses.

17.—The Council shall provide a proper place for the meetings of the Society.

18.—The Council shall re-print, when necessary, the code of Laws, and annually issue a list of the officers and members.

19.—The Council shall provide for maintaining a succession of papers and interesting subjects for deliberation and discussion at the Society's meetings, and shall be authorised to communicate to the Medical Journals short reports of the proceedings of the Society.

20.—The Council shall be empowered to frame Bye-laws for their guidance and for the welfare of the Society, and also make such regulations and perform such acts as may be consistent with the spirit of the Laws and be conducive to the objects and prosperity of the Society.

21.—The Council shall meet at least once a month on a day to be appointed by itself for the despatch of all ordinary business. These meetings to be called ordinary meetings of the Council. A special meeting of the Council may be called by the Secretaries on their own authority, or on the requisition of at least three of its members, three days' notice being given to each member of the time, place, and object thereof.

22.—At all meetings of the Council five of its members shall constitute a quorum; if that number be not present after the lapse of half an hour, the meeting shall be adjourned till the next ordinary meeting.

23.—At the annual meeting of the Society, the Council shall present a report of the work of the past year, the conditions and prospects of the Society, the state of its funds, and such other information as it may consider desirable or important to communicate to the members generally.

24.—One-third of the members of the Council shall go out of office by rotation annually, and shall be replaced by an equal number of ordinary members chosen from the Society at large. But a member who has thus quitted his seat on the Council shall, nevertheless, retain his eligibility to any other office of the Society.

COMMUNICATIONS MADE TO THE SOCIETY.

25.—Written communications, having been read and discussed, shall be deposited with the Secretaries, who shall furnish them, or an abstract thereof, to the Editor of the Society's Journal, and shall enter on the minutes of the Society the titles of the papers read, and the names of the speakers taking part in the discussion thereon.

26.—The Council shall be empowered, with the sanction of the author, to make such use of any paper as may be conducive to the improvement of medical and physical science.

PROPERTY OF THE SOCIETY AND FEES PAYABLE BY MEMBERS.

27.—All property belonging to the Society shall be under the guardianship of the Council.

28.—Every subscribing member shall pay five shillings annually, which shall become due on the 1st of October, and be paid in advance; any member whose subscription shall be more than one year in arrears shall have notice sent him by the Secretaries, and if his arrear extend over

two sessions and no satisfactory reason for it be assigned to the Treasurer, he shall cease after three sessions to be a member of the Society.

29.—Any new member not having paid his subscription during the session in which he is elected, application having been made for the same, shall cease to be a member of the Society. But members elected on or after the 1st of June shall not be required to pay the subscription for the current session.

MEETINGS OF THE SOCIETY.

30.—The ordinary meetings of the Society shall be held on the first Friday in every month from October to the end of the annual session, except in the following cases, viz.: October 1st, or when Good Friday falls on a first Friday; in these events the meetings shall take place on the second Friday. The session shall extend ordinarily over six months, beginning with October, but the council shall have power to extend the session to an aggregate of not exceeding nine months, if the interest taken in the Society's proceedings and the communications offered to the Society shall make such a prolongation desirable.

31.—The chair shall be taken at half-past eight o'clock precisely and vacated at ten, but by consent of the meeting the discussion may be continued till half-past ten o'clock. On Clinical evenings no discussion shall take place in the presence of the patients exhibited. Clinical cases and pathological specimens and other objects provided for exhibition shall be ready for inspection at eight o'clock.

32.—Twenty minutes shall be allowed for the reading of a paper, and ten minutes to each speaker in any discussion which may arise.

33.—Any member introducing visitors shall hand their names to the President, who shall thereupon invite them to participate in the discussion as members for the evening.

ANNUAL MEETING.

34.—There shall be convened at the termination of each annual session, on a day to be appointed by the Council, and to be notified to each member at least seven days before its assembling, a general meeting of the Society, to be termed the annual meeting. At this meeting all officers of the Society shall be elected as prescribed in the laws. The Council, the Treasurer, the Auditors, and the Librarian shall present their respective reports.

SPECIAL GENERAL MEETINGS.

35.—A special general meeting shall be convened by the Council, either on a resolution of a majority of its own quorum, or on the written requisition of twelve Members of the Society, whether members of the Council or not, a week's notice being given, and the object of the meeting specified. No subjects shall be discussed at such meetings except those for which the meeting shall have been convened.

36.—No new law shall be added to the Laws, and no existing rule shall be rescinded or amended, except at a special general meeting convened by the Council, or on the requisition of at least twelve members, stating the precise nature of the addition or alteration intended to be proposed.

CAVENDISH LECTURE.

37.—A lecture shall be delivered annually on the invitation of the Council, and on a day to be fixed by it, by some person distinguished in medical, surgical, or the allied sciences; such lecture to be called the Cavendish Lecture, in memory of Henry Cavendish.

LIBRARY.

38.—The Library shall be under the control of the Council, who shall appoint from its members a Librarian and Library Committee. Subscriptions to the Library shall be optional.

"PROVISIONAL REGULATIONS."

I.—There shall be three Clinical Meetings during the session, viz.:—on the first Fridays in December, March, and June, and they shall be notified on the Session Cards.

II.—The Resident Medical Officers of the West London Hospital shall be invited at the beginning of each session to accept the privileges of the Society (save those of voting or taking part in its business) during their term of office.

III.—In the event of its coming to the knowledge of the executive that any candidate for election may be ineligible from any cause, the Secretary shall communicate at once with the proposer and seconder of that candidate.

IV.—The question of the Cavendish Lecture for that session shall be considered at the October Meeting of the Council.

THE

West London Medical Journal.

Published Quarterly under the auspices of the West London Medico-Chirurgical Society.

IMPORTANT NOTICE.

[I have been desired by the Council to publish the following.—ED.]

The attention of Members of the Society is drawn to the Regulation that all papers read before the Society become the property of the Council of the Society, and that no paper can be published elsewhere than in the WEST LONDON MEDICAL JOURNAL, *save with the permission of the Council, and that all reprints must be obtained from the Society's* JOURNAL *alone. These regulations are not intended to prohibit the publication of papers in other medical journals, but it can be readily understood by members that it is very desirable that loyalty to the Society and its* JOURNAL *should be mutually maintained.*

Original Communications.

THE TREATMENT OF LARYNGEAL TUBERCULOSIS.

BY RICHARD LAKE, F.R.C.S.

Surgeon-Laryngologist North London Hospital for Consumption; Assistant Surgeon Royal Ear Hospital.

As I have taken treatment only of laryngeal phthisis as the subject of this paper, it will probably be better to omit everything connected with diagnosis and symptomatology, as only tending to increase the scope of the paper by introducing matters which, although of considerable interest, are at the same time of less direct use to members of this Society.

Treatment may be divided into local and general, and we may begin by saying that there appears to be no form of general treatment in the ordinary sense of the word that has any appreciable influence on tuberculous conditions of the larynx. Indeed it would be strange if there were, for all our experience shows that tuberculosis of joints, glands, &c., are local manifestations and require local treatment. At the same time we must not lose sight of the material aid we derive from increasing the powers of resistance in the body, and by increasing the numbers and energy of phagocytes and white corpuscles. This may be attained by giving attention to the digestion, the adoption of a judicious dietary and, we have good reason to add, properly chosen atmospheric and climatic influences.

We are placed, then, in this position. The laryngeal affection is part of a general infection, a general infection peculiarly uninfluenced by drugs, but markedly improved by a proper hygienic and climatic course of treatment. To the larynx, however, local or topical applications are available and it is on these that our hopes rest and from them that our cures result.

These local measures can be divided into surgical and non-surgical. The former consist in removal of diseased portions, cleaning up of ulcers, &c., by means of curettes, and depletion of œdematous tissues by puncture. Non-surgical consist of insufflation of powders, painting on, or rubbing in, of solutions, the injection into the tissues of hypodermic remedies, and the injection into the trachea of oily solutions, &c., soothing or remedial. And I will confine my remarks on these points to a few general observations, so as to avoid unnecessary reiteration.

In all cases a solution of cocaine, eucaine, or a combination of these drugs should be used to prevent pain and distress before any of the afore-mentioned proceedings are carried out.

In using any "paint" to the larynx a brush should never be employed, but always a cotton wool mop—for two reasons, cleanliness and efficiency. Brisk and firm friction to be used and continued for an appreciable time, in fact as long as one can, not just dabbing in the solution as if one were afraid:

the larynx is most tolerant of interference.[1] Injections should be of a temperature of about 80° F.; and the patient must be instructed to inhale deeply, to hold his breath a short time immediately after the injection is given, and above all not to cough. The surgical treatment must of necessity be left chiefly in practised hands.

Continuing, one may classify the different conditions which are found in the larynx under six clinical heads, which will to some extent simplify the selection of appropriate remedial measures.

Taking them in order, the least severe first, and entirely omitting those which are merely due to catarrhal states and which are in nowise specific, which some observers try to include, they are the cases particularly which yield brilliant statistics.

(1) A granular condition of the vocal cords.
(2) Superficial excoriation or ulceration.
(3) Œdema.
(4) Œdema and superficial ulceration.
(5) Deep ulceration.
(6) Mixed œdema and deep ulceration.

All these conditions require modifications of treatment to obtain the best results, though one will see fair, even good results, if one rigidly adheres to say, formic aldehyde or lactic acid in every case. I wish here to give my experience based on the treatment of over 200 cases.

(1 and 2) In the two first classes no method of treatment has been more efficacious than intra-tracheal injections. These injections seem to me to be peculiarly suitable for this class of case, and to bring about a quicker cure than when lactic acid is used. It is this class that I described elsewhere[2] as due to micro-organisms other than the Koch bacillus. I will enter more fully into this treatment later.

(3 and 4) In the cases where swelling or œdema alone was present, or where the ulceration, if there was any, was limited in extent, the topical application of drugs was confined to lactic

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[1] Use all solutions as strong as possible, lactic acid 20 per cent., 40 per cent., 60 per cent., or pure, formic aldehyde 1 per cent., 5 per cent. and upward.

[2] *American Journal of Medical Sciences*, April, 1895.

acid, formic aldehyde, or to sulpho-ricinate of phenol. I have had no experience of the other drugs, as parachlorphenol. Treatment of this variety also requires surgical assistance in order to obtain good results, the object being mainly to relieve tension and remove part of the diseased structures as far as possible.

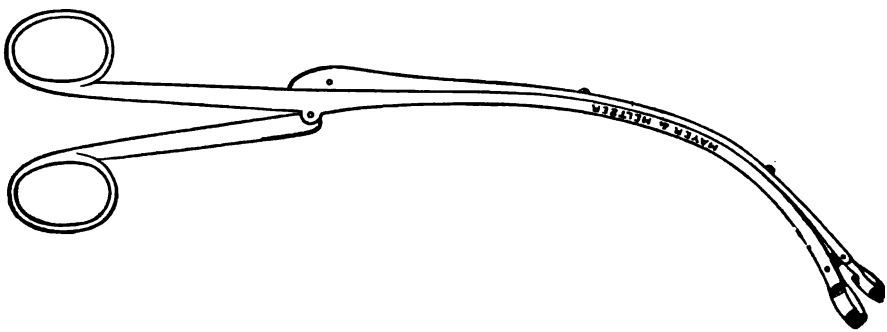

FIG. 1.—Cutting forceps for rima glottidis.

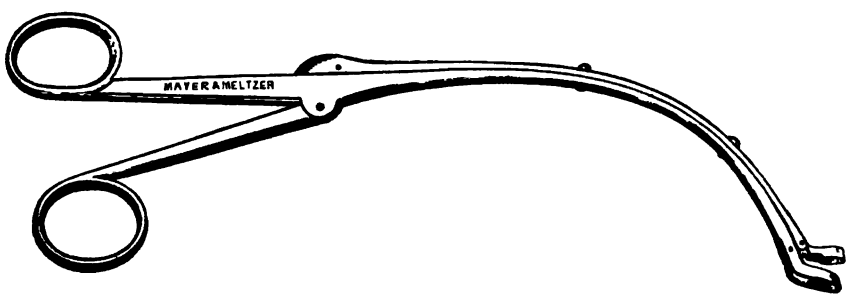

FIG. 2.—Cutting forceps for cricoid plate.

Scarification alone will be sufficient when the parts are only œdematous, but not if the swelling be caused by tuberculous infiltration of the part.

If scarification is not enough one resorts to cutting forceps and freely removes the infected tissues. I have had two different pattern forceps made, and naturally prefer them to other makes, though whether they will commend themselves to others, time will show (see figs. 1, 1A, 2, 2A).

The parts most frequently treated in this way are the epiglottis, arytenoid cartilages, inter-arytenoid fold and the

aryepiglottic ligaments; and the amount of tissue removed is sometimes considerable. The effect is quite brilliant in many cases, either in the appearance of the larynx, or in the relief of dysphagia: the increase of ulceration usually directly diminishing the chances of good results.

Ulcers, especially when situated on the true or false cords, or on the cricoid plate, are often markedly benefited by curetting with Heryng's single curettes.

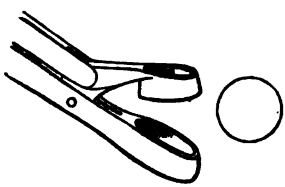

FIG. 1A.—Cutting end of forceps, fig. 1 (full size).

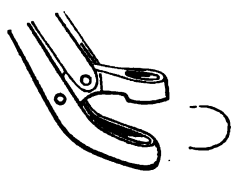

FIG. 2A.—Cutting end of forceps, fig. 2 (full size).

The effect of operation is to enable the tissues to drain off their superfluous moisture and a return to the normal is encouraged. The removal of relatively so small a part cannot directly cure, since too much tuberculous tissue remains; free drainage, however, must materially assist in the cure.

Formic aldehyde or lactic acid should be used after every intra-laryngeal operation on a tuberculous subject, no matter how small the operation be. I recently reported a case[1] in which I removed the epiglottis for this disease by means of the galvano-cautery snare, using lactic acid freely and often for a week afterwards. The results were excellent as far as the larynx itself went, and it may be that a rapid and bloodless removal of the epiglottis may prove of use in other hands.

A point in the pathology of this disease, which may have and probably has a direct bearing is, that there are extremely few bacilli to be found in any of the pieces punched out of the larynx, though tubercles themselves are present.

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[1] *London Laryngological Societies' Reports*, 1898.

When the larynx is extensively ulcerated, and sometimes one finds the whole organ involved in the process of destruction, the patient is usually very ill and will not tolerate even frictions of formic aldehyde or lactic acid, much less more active measures.

In such cases insufflations of the following powder will be found to have a wonderfully soothing and often partly curative effect :—

℞. Iodoform
Orthoform aa. grs. x.

or the old mixture :—

Iodoform, morphia and bismuth.

Should the patient become more tolerant, the larynx is to be treated by frictions with formic aldehyde, both as a remedial measure and also for cleansing the surfaces of the ulcers; in such cases this drug works miracles, and for general use it seems to me superior to all others.

Dysphagia.

If ulceration be present we have no drug equal to orthoform. I have used it for over fifteen months and only twice has it failed me. It is non-toxic and may be used as a powder—the amount is immaterial—or in one of the ways suggested by Yonge.[1] If this fails, we are reduced to morphia, cocaine and menthol, in the exhibition of which I have nothing new to add. Punching out infected tissue from the epiglottis, &c., is most useful, but not to be advocated in hopeless cases now that we have a non-toxic anodyne in orthoform, for that helps to discredit surgical aid.

Intra-Tracheal Injections.

The chief method used in superficial ulceration, intra-tracheal injection, is based on the theory that superficial ulcers are due not to tubercle bacilli, but to cocci.

The main object of the injections is to admit of the ulcers healing by removal of the supply of micro-organisms, and so to prevent an innocent ulcer from becoming a specific one, and at the same time to lessen cough, provide an antiseptic coating to the ulcer and surround the sputum with an antiseptic oily envelope.

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[1] *British Medical Journal*, Feb. 5, 1898.

All of my cases of superficial ulceration received intra-tracheal injections only, the amount administered in the earlier cases being one to two drachms. These injections were repeated twice or thrice weekly. Recently the amount of the dose has been raised to half an ounce, which was done by means of a syringe of that capacity, with a nozzle attached by a bayonet joint (fig. 3), the unpleasant result of a nozzle apt to remain in the throat being more felt by the administrator than the patient, is prevented by the bayonet catch.

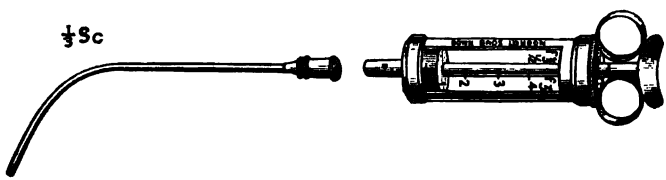


FIG. 3.

My injections had one feature in common, viz., the antiseptic used had no supposed specific anti-tuberculous power. The first was an emulsion of creolin, 2 per cent. This was changed to a solution of naphthalene, 1 per cent. to 4 per cent. The vehicle in all being an odourless paraphene. Comparatively recently this gave way to one which seemed to possess greater advantages. This was Izal oil, 3 per cent. emulsion. I am of opinion that an emulsion is more effective than a simple solution, and I now advise the naphthalene treated with an emulsifying agent, lanoline, 3 per cent.

The chief advantages of emulsions are :—

They are less irritating, and patients are not conscious of the hot burning feeling caused when solutions are used. They do not leave so unpleasant a taste in the mouth, and thus the appetite is not so often deranged.

In sensitive patients the time of administration is of some importance; if given shortly before a meal they frequently spoil the appetite (a serious matter in a consumptive). If given just after a meal, retching and vomiting are by no means uncommon. The best time is 10 to 10.30 a.m. if breakfast is at 8, and dinner at 1 p.m.; at least this is the result of my experience.

In the mixed cases, where swelling was combined with ulceration, topical applications and frictions of formic aldehyde or lactic acid were used in addition to the injections.

These were either on alternate days or, as has been my later custom, the two have been used on the same day. When this has been the case the paint has taken precedence, chiefly since it would not have been easy to apply it to tissues already coated with oil. In cases of pure or almost pure swelling and œdema, I have found the injections of only very slight service. In fact much inferior to scarification and subsequent application of lactic acid.

The following appears to me to be the *modus operandi* of intra-tracheal injections—the latter have been in use by me at the North London Consumptive Hospital since October, 1895; all my injections have an oily basis, oily bases possessing the following advantages:—

(1) The injection is less irritating.

(2) The injection is less rapidly absorbed by the mucous membrane.

The contained antiseptic is of use. First, to sterilise the sputum on its way to and through the larynx. Secondly, in surrounding the masses of sputum with an envelope of antiseptic oil, thus assisting it to pass over the already injured parts without inflicting further damage and without causing irritation. Thirdly, the larynx and trachea are provided with a protecting glaze, and at the same time concussion and bruising is diminished by the greater ease of expectoration. Fourthly, when the cough is harsh and there is but little accompanying secretion, the injections are distinctly sedative in their action. By thus allaying irritation the inflamed parts are kept at rest. This is as important a factor in this disease as any other. For like reasons one should prohibit much conversation.

Prognosis.—This is good in those cases where the lesion consists of superficial ulcers, especially when situated on the vocal cords, or when that condition peculiar to the affection under consideration, viz., a "granular corditis" is present. When there is œdematous swelling only, the prognosis is fairly good; this condition being more influenced by the condition of the patient's lungs than the former. The prognosis is worse in those instances where the swelling is

accompanied by ulceration, and it is bad in extensive and bilateral ulceration with œdema. This is not improbably due to the fact that the agents destroying the lungs are pathogenic cocci, which are the active agents in superficial ulceration of the larynx. When the lungs are also breaking down rapidly one has to deal with tissues devoid of any recuperative power with which to second our endeavours.

It is a subject for much congratulation that the advance of laryngology enables one to look upon so fair a proportion of cases as curable. Morell Mackenzie remarked that in all his experience he only knew of four cases in which the disease was entirely arrested. Certainly, when we talk of "cure" in these cases, we laryngologists refer to the state of the larynx, and not to the general condition.

As an example of this the following case is characteristic. A patient was brought to me suffering from fairly rapid pulmonary tuberculosis, he also had an ulcer in the inter-arytenoid fold and considerable swelling in this region. He was treated entirely by intra-tracheal injections and at the end of six weeks his larynx was healed; this condition was maintained until his death two and a half years later. For anyone to deny this to be a case of cured laryngeal phthisis seems to me to be unreasonable.

When my list of cases is long enough I hope to publish a statistical table, but under 500 is too small to obtain even an approximate result.

A SERIES OF TWELVE CASES OF TRACHEOTOMY FOR LARYNGEAL DIPHTHERIA IN YOUNG CHILDREN, WITH NINE RECOVERIES.

By James Allan, M.B., C.M.

Eleven of the following cases occurred at the Barnes and Mortlake Isolation Hospital, and I have to thank the Medical Officer (Dr. J. Adams) for his courtesy in permitting me to record them. One case occurred in private practice. It rarely happens that a man engaged in private practice has the opportunity of operating on a series of twelve consecutive cases of laryngeal diphtheria, and I have thought that notes

of these cases (the ages of which range from 15 months to 5 years) might be interesting to this Society.

CASE 1.—M. T., female, aged 5 years, was admitted on January 14, 1897, suffering from laryngeal diphtheria. 1,500 units of antitoxin were injected. I performed tracheotomy under chloroform four hours after admission. The tube was removed on January 20, having been worn for six days. The child was discharged, cured, on February 20.

CASE 2.—H. H., female, aged 3 years, admitted on April 13, 1897, suffering from laryngeal diphtheria. When this case was brought into the ward from the ambulance the breathing stopped completely and the child was pronounced dead by those present. I, however, had the child at once placed on the table and rapidly performed tracheotomy. No anæsthetic was required. There was no bleeding and no attempt at respiration. After placing the tube in the trachea I commenced artificial respiration, and had the intense satisfaction of seeing the breathing restored in a few minutes. The child was placed in bed, hot-water bottles placed around her and 2,000 units of antitoxin injected. She made an uninterrupted recovery. The tube was removed on April 29, having been worn for sixteen days. The child was discharged cured on June 1.

CASE 3.—E. H., female, aged 5 years. A private case. Laryngeal diphtheria. I performed tracheotomy under chloroform on November 22, 1897. The tube was removed on November 26, having been worn four days. The wound healed rapidly and the child was quite well in about five weeks.

CASE 4.—N. S., male, aged 3 years, was admitted on May 6, 1898, suffering from laryngeal diphtheria. Antitoxin (1,500 units) was injected, but the breathing got worse. On the evening of the 7th, I was hastily summoned to see him. On arrival at the hospital shortly afterwards I found him in an alarming state of dyspnœa. I immediately had him placed on the table and performed tracheotomy, the nurse assisting me. No anæsthetic was used, as there was no time and no medical assistance. The operation was difficult, owing to the struggles of the child. Immediately the trachea was opened immense relief followed. The tube was removed on May 12, having been worn for five days, and the child was discharged, cured, on June 20.

CASE 5.—F. N., male, aged 2 years, admitted on May 24, 1898, suffering from laryngeal diphtheria. Laryngotomy was performed on admission. On June 3 it was found that bloody mucus and food came through the tube. Examination of the wound revealed an ulcerated opening into the œsophagus. The child was very much exhausted. I decided to perform tracheotomy as low down as possible and to feed the child entirely by the rectum, in order to give the wound in the œsophagus complete rest. On June 9, six days after the tracheotomy, the tube was removed. The child breathed fairly well until the 12th, when the tube had to be re-inserted for dyspnœa. Repeated attempts were afterwards made to remove the tube, but it was found that the child could not breathe without it. The tonsils were very large and the posterior nares blocked with adenoid growths. As the condition of the little patient did not justify operation for their removal, I decided to wait and by careful application of tonics and feeding to prepare him for further operative treatment. On August 10, two-and-a-half months after the original operation, the child's condition having much improved, I removed the tonsils and adenoids under chloroform and had the satisfaction of being able to remove the tube permanently two days afterwards. The child was discharged, cured, on August 22, having been in the hospital three months.

CASE 6.—L. M. T., female, aged 3½ years, admitted on June 25, 1898, suffering from laryngeal diphtheria. I performed tracheotomy under chloroform shortly after admission. The tube was removed on July 1, having been worn six days. The child was discharged, cured, on July 30.

CASE 7.—D. W., female, aged 15 months, was admitted on July 3, 1898, suffering from laryngeal diphtheria. 1,500 units of antitoxin were injected, but the child became worse. On the following day the dyspnœa was very marked. I performed tracheotomy under chloroform. The operation gave immediate relief. The tube was removed on July 7, having been worn for four days. The child was discharged, cured, on August 11.

CASE 8.—M. T. C., female, aged 2 years, admitted on July 4, 1898, suffering from laryngeal diphtheria. The breathing was difficult, but it was decided to try the effect of a large dose of antitoxin. 2,000 units were injected. The condition

of breathing continued stationary until the following day, when it rapidly became worse. I performed tracheotomy in the evening under chloroform, the child being in a state of coma from the combined effects of CO_2 and diphtheria toxin, and the case almost hopeless. Another dose of antitoxin (1,500 units) was injected. The child rallied a little, but died on the 13th inst., from toxæmia and exhaustion.

CASE 9.—G. B., male, aged 2 years and 9 months, admitted on July 9, 1898, suffering from laryngeal diphtheria. Antitoxin was again tried, 2,000 units being injected on admission. Late the same night I performed tracheotomy under chloroform, the condition of the patient then being similar to that of No. 8. The operation gave relief, but the child died from toxæmia and exhaustion on July 15.

CASE 10.—I. H., female, aged 2½ years, admitted on July 16, 1898, suffering from laryngeal diphtheria. I performed tracheotomy, under chloroform, two hours after admission; 1,500 units anti-toxin were injected. The tube was removed on July 20, and the child was discharged, cured, on August 22, 1898.

CASE 11.—E. S. G., male, aged 18 months, admitted August 1, 1898, suffering from laryngeal diphtheria; 1,500 units of antitoxin were injected. I performed tracheotomy under chloroform, late the same night—the child being moribund. He died the following morning.

CASE 12.—E. N., female, aged 2½ years, admitted on November 30, 1898, suffering from laryngeal diphtheria. Antitoxin was injected on admission (1,500 units). The breathing became much worse, and on the following day I performed tracheotomy under chloroform. The tube was taken out on December 10, but had to be replaced some hours afterwards. It was finally removed on December 14; the child is still in hospital.

Total admissions for 1897, 27 cases; 1898, 29 cases.

Some of these cases present points of special interest, to which I would briefly call your attention.

Case No. 2 is a striking proof of the value of tracheotomy, even in what appears to be a completely hopeless case. When this child was brought into the ward the breathing stopped completely, the child being practically dead. Prompt operation, followed by artificial respiration, restored the

breathing, and with careful nursing and anti-toxin, recovery followed in due course. There was no time for aseptic preparation for the operation, yet the wound healed readily. There is no doubt that in this case the operation literally snatched the child from the grave.

Case No. 5 is a very interesting one. The laryngotomy was successful in relieving the urgent symptoms at the time. No laryngotomy tube was at hand, but a tracheotomy tube was substituted. This tube was too long and pressed against the posterior wall of the larynx causing ulceration, which in ten days perforated the œsophagus. The tracheotomy was difficult owing to the child having a very short, fat neck. Chloroform was administered and an incision beginning at the cricoid cartilage and extending downwards almost to the episternal notch was made. By careful dissection the trachea was reached and opened in its lower rings—in fact, as low as it was possible to get.

All food by the mouth was stopped in order to give the wound in the œsophagus every chance of healing. He was fed entirely by the rectum. At the end of three weeks it was found that he could swallow solids with ease. A point of great interest in this case was the long retention of the tracheotomy tube, required by the enlarged tonsils and adenoids, as proved by the fact that two days after the removal of these growths he was able to breathe freely without the tube. I have not been able to find any reference to enlarged tonsils and adenoids as a cause of long retention of the tracheotomy tube, and would suggest that in all such cases a careful examination of the pharynx and posterior nares be made and any abnormal growths removed.

Case No. 7 is interesting owing to the early age of the child (15 months). The tube was worn for twenty-three days, rather longer than usual, but recovery followed. In this case I believe anti-toxin played an important part.

Cases No. 8 and 9 are those in which anti-toxin was tried for some time before operation. The breathing was very bad on admission. Antitoxin failed to relieve it, and tracheotomy had to be resorted to. In both cases the children were extremely exhausted from the combined effects of insufficient aëration of the blood and diphtheria toxin. I would call attention to the great relief afforded by the operation even in

these extreme cases, and the prolonged life in one case for eight days, and the other six days after the operation.

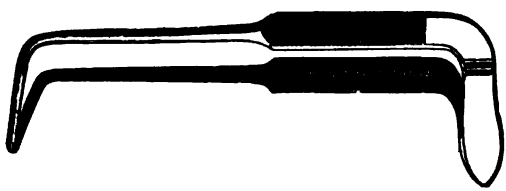
Case No. 11 was a perfectly hopeless one, as the child was moribund on admission. I only operated with the object of giving relief to the little sufferer. The operation was successful so far, the breathing being much relieved.

With regard to the time when the operation is demanded. Edmund Owen says, in his "Surgical Diseases of Children," "When insufficient air is entering the lungs, the signs of which are sinking of the supra-clavicular, supra-sternal and epigastric regions and prolonged and noisy respiration." He also significantly adds, "If in doubt as to whether operation should be further delayed, operate at once." This I find is a very good rule in practice. When a child is brought in with undoubted signs of laryngeal diphtheria and with obstructed respiration, it is dangerous to delay the operation. Antitoxin (although a very valuable adjunct to tracheotomy) will not cure, as the child has also to combat the depressing toxic effects of CO_2. Besides, the operation, carefully performed, does not in any way prejudice the child's chance of recovery.

The landmarks for the operation are the thyroid and cricoid cartilages, the trachea and episternal notch. It is usually recommended to open the trachea in the higher rings, beginning the incision at the cricoid cartilage. The trachea here is more easily exposed and there is less risk of hæmorrhage. I prefer, however, to operate lower down, beginning my incision below the cricoid cartilage, which is the first prominence met with if the finger is drawn upwards from the episternal notch in the middle line. The trachea here lies deeper than at the cricoid, but there is a better chance of getting the tube inserted below any membrane that may have formed in the trachea, a very essential thing. In this operation the isthmus is usually divided, but I have found no ill result from such division. There is also an engorged plexus of veins lying across the trachea at this point, but the bleeding is never serious and can be controlled by sponging. In none of the twelve operations have I found it necessary to ligature a vessel, and only in a few cases have I found pressure forceps necessary.

It is also recommended that before opening the trachea it should be fixed by a sharp hook and drawn up into the

wound. I have found this method very unsatisfactory, as unless the hook be held very firmly it is liable to slip at the critical moment when the knife is plunged into the trachea and so prolong the operation. When the trachea is fully exposed I prefer to guide the knife to the centre of it by the forefinger of the left hand, the nail of which impinges on the trachea. I find this is a very satisfactory method, and it saves time, a most important matter in these operations. When the knife is in the trachea I turn it slightly round on its long axis, thus dilating the wound, and before withdrawing it, I guide along its flat surface this dilator (*shown*) which is

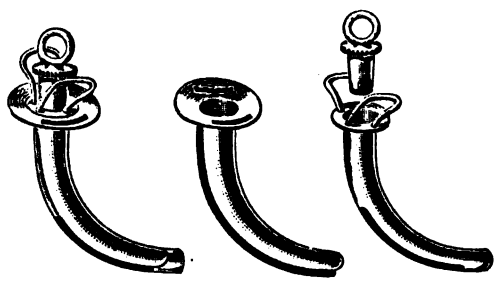


fine at the point and well dilates the opening in the trachea. After trial of several dilators I prefer this one. There is no difficulty in inserting it when the knife is used as a guide. I always put one stitch in the skin wound after the tube is inserted, as I find it lessens the resulting cicatrix.

With regard to the form of tube used, I prefer the ordinary silver bi-valve. It is easy to introduce and has the advantage of easy removal of the inner tube for cleaning. The practice at the above hospital (I think a most desirable one) is to keep a duplicate inner tube, which is inserted immediately the one then in use is removed for cleaning.

In several cases I have found that, after the tube has been removed and the wound in the neck covered up, the child breathing comfortably, difficult breathing has again set in some hours afterward, requiring the re-insertion of the tube. Such an occurrence causes much distress to the little patient and considerable alarm to the nurses (especially in a hospital such as the above, where there is no resident surgeon). It is due in a great extent to laryngeal stenosis. The muscles of the upper respiratory tract have for a few days had complete rest and are suddenly called upon to resume their normal func-

tions, with the result that they sometimes fail. To obviate this difficulty I designed this tube (*shown*) which was made for me by S. Maw, Son & Thompson. It has a long, open, slot on the convex side of the inner tube the end of which is fitted with a plug. When the plug is in the tube, the long slot allows the child to breathe through the larynx and to articulate in the ordinary way. Should difficult breathing supervene the nurse has only to remove the plug to give immediate relief. It affords time for the larynx to resume its normal functions, with the additional safety of the open tube, should difficulty arise.



In two of the cases I have had difficulty from the appearance of a valve-like piece of membrane which flapped up and down across the end of the tube at each inspiration. It was caused by the mucous lining of the trachea having been pushed aside by the leg of the canula on insertion. It was easily removed by a pair of long, fine forceps and scissors.

The after treatment of these cases was an atmosphere of moist, warm air, containing some antiseptic, preferably carbolic acid, tonics, and spraying the throat with a warm saturated solution of boric acid. I also recommend to spray the tube with the solution, as it prevents the expectorated mucus from adhering to the tube and provides an antiseptic mild and soothing to the trachea and neighbouring bronchi. It has been objected that this method is mischievous owing to the introduction of fluid into the bronchi and lungs. I can only say that in practice I have not found it so. The hot and inflamed mucous lining of the trachea quickly absorbs any small quantity of fluid introduced by the spray.

In the foregoing remarks I have dealt only with the surgical treatment of what is usually a very fatal disease. The results (75 per cent. of recoveries) are encouraging, and I would urge that, in all cases of diphtheria presenting the above-mentioned symptoms of difficult and insufficient breathing, the performance of tracheotomy at once. The operation will afford immediate relief to the little patient, and combined with the now undisputed valuable remedy, antitoxin, will seldom fail to effect a cure.

ON THE TREATMENT, MEDICAL AND SURGICAL, OF ACUTE INFLAMMATION OF THE VERMIFORM APPENDIX.

By Seymour Taylor, M.D., M.R.C.P.
Senior Assistant Physician to the West London Hospital.

This subject is a useful one for discussion as the physician sees the case at onset, whilst the surgeon, as a rule, sees it late in its course.

In no department of operative surgery has greater studies been made than in that relating to abdominal diseases.

Possibly a similar, if less eulogistic remark may be applied to the domain of medicine, seeing that now the physician recognises the danger of that useless, obsolete and rudimentary diverticulum called the appendix, and he regards it as the culprit in perhaps 90 per cent. of those cases in which a "lump" presents in the right iliac fossa, thus exonerating the cæcum from long years of suspicion. Now, although in most diseases it is essential, in order that correct and scientific treatment be carried out, to accurately know the cause of the disease, this remark does not apply, in its entirety, to such a condition as appendicitis.

So long, then, as we recognise this diverticulum as the cause of those groups of symptoms which have been labelled typhlitis, peri-typhlitis, we have made a long stride forward.

There is one further step which I would contend for, viz., that sepsis by micro-organisms or by their products, is the chiefest, if not the only cause, of that form of peritonitis, whether local or general, which is a sequel to the condition we are discussing.

I do not say that appendicitis is not set up by the influence of foreign bodies such as fruit-stones, grit, and hardened fæces. I do not say that the condition may not be preceded by a catarrhal enteritis of the appendix. I admit also that tuberculous deposit may, in a small percentage of cases, be the starting point.

But I do contend that these alone are not sufficient, except in rare instances, to cause appendicular peritonitis; and that such a grave condition is only produced by the invasion or inoculation (if you will) on an irritated, and therefore prepared, surface of some micro-parasite, numerous varieties of which teem and swarm in the alimentary canal.

Now, as regards the treatment of this disease, I apprehend that from the physician's point of view there are two periods when his advice is of the utmost weight and importance. The first period is the prophylactic one, when, given a man who is prone, by one or more previous attacks, to appendicitis, we may so order his mode of life as to postpone, or even prevent, subsequent seizures.

The second period (and this is the most interesting, as well as the most anxious to us) occurs when appendicitis and subsequent local peritonitis, having supervened, the question arises can we arrest the progress of the disease at this point? for suppuration having once occurred, the case then passes from the domain of medicine into that of surgery.

Taking the first category, or preventive cases, it is not a little singular that my figures point to two well-marked exciting causes, viz., in males, the influence of a large, indigestible, and probably hastily devoured meal; and in females, the influence of strain. My figures are not numerous, but I find, on referring to notes, that in more than half my male cases there is a prior history of grave errors in diet, *e.g.*, a club-dinner, or a bean-feast, or the consumption of large quantities of new bread, or uncooked salads.

In females, on the other hand, there is a frequent history of moving of heavy furniture during house-cleaning or of

straining the abdominal parietes by picture-hanging, or wiping down walls.

It is quite possible that, in the latter or indeed both instances, there have been previous attacks, and that the extra strain put on the bowel, in the one case from within, and in the other case from without, has resulted in the breaking down of inflammatory adhesions which had hitherto been the safeguards of the patient.

Here, then, are indications of the line which our advice should take.

The patient should refrain from indulging in heavy meals, from indigestible food, from taking prolonged walks or cycle rides, and from subjecting the abdominal parietes to unwonted strain.

Then, again, the question of the constituents of a dietary are important, and suggestions on this point may be derived from a study of some of the lower animals. In most, if not all, of the rodents the appendix is not rudimentary, but is a well-developed diverticulum. Possibly this zoological fact may suggest to us that our food might be of a more vegetable order than it is, and that mastication should be a more prolonged process than is bestowed on it by the modern busy man. One article of diet, however, I cannot too strongly condemn, so far as sufferers from appendicitis are concerned —I allude to milk. Setting aside its well-known possibilities as a vehicle for bacterial invasion, it has a distinct danger from its tendency to produce bulky and scybalous stools, and thus cause that mechanical obstruction to the easy flow of soft excreta which it should be our aim to promote.

I cannot, therefore, too strongly urge upon you the necessity of a liquid and a vegetable diet, a diet which shall secure a sloppy and unformed evacuation such as is common to the bovine class of animals.

I now pass on to the consideration for a few minutes of those cases in which the tumour, having formed in the iliac fossa, the question arises, "What shall the physician do?" or "What line of treatment shall he adopt?"

Two methods of treatment, quite antagonistic, have been advocated, and by able clinicians.

One school in effect says, "Do nothing but keep the patient quiet in bed, order a fever diet, and give opium in order to ensure rest to the bowel."

The opposite school advocates saline, or even mercurial purges, with a view to cleanse out the products of the offending cæcum and its appendage.

I apprehend that no hard-and-fast rule can be laid down to suit all cases, but the tendency of my experience is in favour of the first plan. Fortunately enough, during the last autumn when I had charge of Dr. Hood's beds, three cases were under my care, all of whom recovered under the treatment of absolute rest, a vegetable diet consisting mainly of boiled spinach, cauliflower, with a little beef-tea, milk being rigidly excluded. Small doses of opium were given to allay pain and afford sleep, and the lower bowel was emptied daily by soap-water, or olive-oil enemata.

Notwithstanding all this, we are still in the dark as to what is really the best medical treatment for our patients. Whatever we do there will still be two classes of cases (I am speaking now of those patients who are still under the hands of the physician), viz., one class in which the tumour resolves in a longer or a shorter period, and the case may have been treated by opium, or it may have been treated by purgation; and another class in which the disease proves fatal, rapidly and almost at once; the perforation has occurred and the peritoneum is on fire almost before time has been allowed to form a decisive diagnosis of the existence of typhlitis.

Let me go one step further and say that no one can foretell which case will resolve, which case will rapidly go on to perforation and speedy death; nor yet again which case will linger on till suppuration occurs and surgical skill is necessary. Now, if my contention be correct, there is, to my mind, one question only which requires answering, and it is a question which we should put to surgeons. I would ask them to give us statistics as to the vulnerability of the peritoneum. "What is the death rate of exploratory laparotomy in the hands of competent surgeons specially skilled in this branch of surgery?" If it be a low death rate, or a death rate which is less than the mortality experience of those cases which are treated entirely by drugs, whether opium or calomel, then I contend it were better at once to hand our cases over to our surgical colleagues. It would seem, if one may judge from the numerous records of cases of extirpation of the appendix in the United States, that the mortality is

a low one. But we must have figures of our own. Mode of life and its environments are different in this country, and possibly statistics would differ, but whether towards the favourable side or the opposite I am not in a position to judge.

Should the case have passed on to suppuration, there can, I think, be no two opinions as to the necessity of surgical help. Do not delay a single hour. An abscess limited to the cæcum and its surroundings is one thing; a diffuse suppurative peritonitis is a totally different emergency. The one may mean a temporary illness only, the other almost certain death. I say this even after reading of successful laparotomies by Mr. Cuthbert Wallace and other able surgeons.

My own experience is that the peritoneum is the most sensitive organism in the body. As I have stated elsewhere, animals struck by shot or other missiles in the abdomen die at once, or are rendered, from shock, incapable of further efforts of escape or defence.

A patient to-day may, to all appearances, be suffering from a local peritonitis only, and with no very unfavourable symptoms, while to-morrow he may be suddenly beyond all hope. There often comes an hour, which none of us can predict, when the patient is, as it were, although to all appearances doing well, precipitated over the abyss to certain death.

Nor are we always able to say that suppuration is present. The cardinal and classical signs of heat, swelling and redness are not always present, and the thermometer may register a low temperature of early shock which may mislead. Though in no way wishing to belittle the diagnostic power of the thermometer, since pus is usually denoted by violent oscillations of the temperature curve, I would ask you to use it intelligently and note its readings in conjunction with the condition of the pulse and tongue as indications of the presence of pus.

Finally, as a word of advice to surgeons, given with all due modesty, I would impress on them the urgent importance of operating on the abdomen in all cases of doubtful obstruction of the bowels by such an incision as will command an easy examination of the appendix. Of eighteen cases of obstruction which I have seen in recent years, and in which laparotomy was called for, in ten the appendix was the original

seat of disease, notwithstanding that symptoms, in a large proportion of these, pointed to the site of the obstruction being in some other part of the intestinal tube. The site of pain and tenderness is absolutely no guide to the seat of mischief.

THE SURGICAL TREATMENT OF ACUTE INFLAMMATION OF THE VERMIFORM APPENDIX.

By W. McAdam Eccles, M.S., F.R.C.S.

Assistant Surgeon to the West London Hospital; Assistant Surgeon to the City of London Truss Society; Demonstrator of Operative Surgery at St. Bartholomew's Hospital.

We are here to-night to discuss the treatment of acute inflammation of the vermiform appendix, and however interesting its etiology, mordid anatomy and clinical signs and symptoms may be, time will not allow even to allude to them; treatment, and treatment only, is our theme.

Given a case where acute inflammation of the cæcal appendage has been diagnosed—and the diagnosis is not a matter of much difficulty in the present day—the question immediately arises will the treatment be wholly non-operative, or may the aid of the surgeon be necessary? Dr. Seymour Taylor has graphically put before you the answer from the physician's point of view, and I hope that some of those who follow may be able to add to this from another aspect, that of the medical practitioner who has in private work to deal with numerous instances of the disease which are either too simple in their course or too indefinite in their symptoms as to require the assistance of the physician.

It therefore falls to my lot, through the kind invitation of our Council, to endeavour to give the answer from the point of view of one whose practice is surgery alone.

I venture to think that there are a considerable number of cases of appendicitis which at some period do need operative interference, and I am before you to-night, as doubtless

many of you know, as one who has himself required the aid of a brother surgeon to stay the pus-producing hand of the colon bacilli in one of their smaller workshops.

At the outset I think that we may classify the instances of acute inflammation of the appendix in which it is desirable that the surgeon should interfere under the following headings:—

(1) General septic peritonitis.
(2) Localised abscess in the right iliac fossa.
(3) Localised abscess in remote regions.
(4) Relapsing appendicitis.

I take it that every case in which suppuration occurs in connection with acute inflammation of the appendix should fall under the scalpel of the surgeon, and that probably at a comparatively early stage of the disease, although the precise time at which an incision should be made may be a matter of some difference of opinion. But before we pass to the consideration of such cases, let us take those extremely distressing ones in which there is so rapid a disintegration of the appendicular tissue, that perforation occurs into the general peritoneal cavity even before actual pus can be said to have formed. Almost before there has been time for an accurate diagnosis to be made, the patient is plunged into an extremely dangerous condition, for as in the case of a perforated gastric ulcer, in which there may have been but few previous symptoms, the onset of the disease is terribly sudden. Such instances are comparatively rare.

There is rapidly developed profound septic peritonitis, with great absorption of the toxic fluid by the serous membrane, and the prognosis is so grave that it becomes a question as to whether any line of treatment has the least chance of saving the patient's life.

However as the case is one in which surgical interference is the only hope, this should be undertaken after there is a distinct understanding on the part of the patient's friends that it is a last resource.

Here it is that an incision in the middle line of the abdomen, deliberately into the general cavity of the peritoneum, is to be made with as little delay as possible. This will act in the first place as a diagnostic measure, and if the source of the infection is found to be the appendix, I consider myself that

it is always then advisable to make a further incision over the site of this organ, that is to say in the right linea semilunaris. I do this because it is almost impossible to adequately deal with the offending appendage through the median incision, and because it allows of a much more efficient flushing of the peritoneum than does an incision merely in the middle line. I would wish to ask the surgeons present for their opinion on the question of this second incision.

I now pass to the discussion of the more common cases in which suppuration occurs, there being none of the fulminating symptoms such as are present in the above-mentioned form of the disease.

It is often extremely difficult to be certain that suppuration has actually taken place, but if the local signs and general symptoms point to it, then operative measures are certainly called for.

These instances may be looked at from two aspects: first, those in which there is a tendency to much formation of pus, the "freely suppurating," and those where but a small quantity of matter is produced, the "locally suppurating."

In the freely suppurating cases it is true that sometimes the patient will recover after the passage of the pus through the skin, into the bowel, or bladder, but there is a very decided risk in leaving the matter to thus track by itself. It is true also that the locally suppurating cases may sometimes end in the pus becoming as it were encapsuled, but these collections of matter are always sources of subsequent danger.

The formation of a "large" abscess, one of a few ounces of pus, is comparatively speaking a less dangerous circumstance from the point of view of operative interference than is the "small" abscess, perhaps only a few drops of pus.

In the former the pus is easily reached and there is no great fear of infecting accidentally the general cavity of the peritoneum, while in the latter much search may be required to localise the matter and that only with the utmost likelihood of fouling the peritoneal space.

In the freely suppurating cases, I would venture in no unqualified tones to disclaim against the use of an exploratory needle. Such a manœuvre is altogether unsurgical, besides being actually dangerous and uncertain. It is infinitely

preferable to make a deliberate exploration through an incision which will allow the operator to observe what parts he is traversing.

It is very uncommon in my experience that the use of the scalpel is called for until some days have elapsed since the onset of the symptoms, the fifth, sixth, or even seventh days being those on which the incision is generally required. I do not pretend to say that it may not in some cases be right and proper to cut down on the pus at an earlier date, but what I do think is that the case will not do any the less well, and perhaps a good deal better, if it is left sufficiently long to allow some amount of adhesive peritonitis to close off the general cavity of the peritoneum. It is not the rule for the pus of itself to find its way into the serous cavity, but it may be easily introduced there by too early interference.

No doubt cases do occur in which an early operation might have saved life, and although such instances would tend to show that the pus should have been sought for sooner, yet to my mind they do not warrant the rule that is sometimes propounded that all cases of appendicitis should be indiscriminately operated upon within the first twenty-four or thirty-six hours of the beginning of the affection. No, I feel convinced that we want a happy mean of opinion and action, and that each case requires the most careful watching and dealing with on its own merits.

Then as to the precise mode of procedure in these cases, I would venture to lay down two points rather emphatically.

(1) That there should be a very free exit given to the pus.

(2) That there should be merely simple drainage of the abscess.

With regard to the first dictum, I always open the area in which the pus is very freely, but at the same time with as little damage as possible to the tissues through which it is requisite to pass. An insufficient opening is, in my opinion, worse than useless.

Most commonly the incision should be made directly over the swelling, that is, in the adult, about one inch internal and below the right anterior superior spine.

The skin and fascia having been divided, the muscular tissue that is beneath should, if feasible, not be cut, but the fibres separated. After division of the transversalis fascia,

great caution must be observed in passing towards the seat of the pus, so that there should be no fouling of the peritoneal cavity, if this be opened into.

With regard to the second essential, the less manipulation there is, after the pus is reached, the better, in my opinion. Washing out the abscess cavity is not called for, much less scraping its wall, which consists in part of intestine.

I do not think that there should be any attempt to remove the appendix, unless this structure actually presents when the abscess is incised. Most cases do remarkably well when left to Nature, after a thorough exit for the pus has been made, and in my experience such cases seldom have any further trouble with the appendix, for it is nearly always either completely sealed off, or has sloughed.

Occasionally a ventral hernia may form at the site of the incision, and necessitate the use of an inguinal truss with an interstitial plate.

It becomes a question—and in this I would again ask for the opinion of other surgeons present—in some instances as to whether a counter-incision should be made in the region of the loin, that is, above and behind the anterior superior spine, so as to secure more efficient drainage.

In cases where only a comparatively small quantity of pus has formed the inflammatory process not infrequently subsides and the patient to a certain degree recovers, but if the appendix is afterwards cut down upon—in the interval between attacks—the small collection of pus will be found. Much care is then needed to avoid infecting the general serous cavity.

Time will not allow of my entering fully upon the subject of operating where the abscess is found at a site distant from the right iliac fossa, but I might make allusion to a case that I had in the hospital a few years ago, in which a young man had a collection of pus, derived from an inflamed appendix, in the cellular tissue behind the rectum, and which was producing such pressure forwards that there was both intestinal obstruction and retention of urine. The abscess was successfully treated by a median laparotomy.

Abscesses have also to be evacuated in the region of the liver; beneath the diaphragm, in the left iliac fossa, and in hernial sacs.

It is not my intention to more than notice the fact that acute inflammation of the appendix frequently necessitates the removal of the organ, during quiescence after an attack. Such an operation is attended with but little danger, and with the most beneficial results.

In conclusion, I may say that it has been my object to briefly review the surgical treatment of appendicitis, in order that this may be criticised and more fully discussed by the many present who have had experience of such treatment.

DISINFECTION OF TYPHOID EXCRETA. — Dr. W. Gilman Thompson (*Albany Medical Annals*, April, 1897) concludes as follows: (1) The best disinfectants of typhoid stools for practical use are: (*a*) 1 to 500 acidulated solution of corrosive sublimate; (*b*) 1 to 10 crude carbolic acid solution; (*c*) chlorinated lime. (2) Owing to the possibility of injury to plumbing, the carbolic acid solution is preferable wherever plumbing is concerned. The lime is best for country use in privies and trenches. (3) The disinfectant should be thoroughly mixed with the stool and left in contact with it for fully two hours; enough of the disinfectant must be added to cover completely the stool with the solution. (4) The bed pan should be kept readily filled at all times with at least a pint of the disinfectant, into which the stool is at once discharged, and should be cleaned with scalding water and one of the disinfecting solutions. (5) Rectal thermometers, syringes, tubes, and all utensils coming in contact with any of the fæcal matter must be disinfected with the corrosive sublimate or carbolic acid solution. (6) After each stool the patient's perinæum and adjacent parts should be washed and sponged with a 1 to 2,000 corrosive sublimate solution. (7) Nurses and attendants should be cautioned to wash their own hands thoroughly and immerse them in a 1 to 1,000 corrosive sublimate solution after handling the bed pan, thermometer, syringe, or patient, or giving sponge or tub baths. (8) All linen and bedclothing used by the patient should be soaked in a 1 to 20 carbolic acid solution and subsequently boiled for fully two hours. (9) Disinfection of the stools should be begun as soon as the diagnosis of enteric fever is established, and should be continued for ten days after the temperature has remained at the normal. (10) In localities where a proper drainage system is lacking, the stools should either be mixed with sawdust and cremated, or buried in a trench four feet deep after being covered with chloride of lime.—*Medical Record.*

Report of Proceedings.

Ordinary Meeting—January 6, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

Hypertrophied Prepuce.

Dr. JAMES ALLAN: This is a prepuce which I removed from a child 9 months old in August last year.

The history is that at the age of 4 months the mother noticed some enlargement, but paid no attention to it. The enlargement continued until the child was 9 months old before she sought advice about it. When I saw the case the child looked ill and was very restless. The whole penis was inflamed and shiny, and presented the appearance of acute inflammation. Urine was oozing from a pinhole meatus. I dilated the meatus and slit the foreskin up the front of the glans on a director, and then removed the mass by a circular incision corresponding to the sulcus at the back of the glans. I tore up the mucous membrane, which was adherent to the glans, and joined it to the skin by a continuous silk suture. The wound healed in four days. There was no history of balanitis or of any discharge from the meatus. I might add that I attended the mother at her confinement, and at that time there was nothing abnormal about the penis.

Mr. T. R. ATKINSON: This prepuce is obviously of unusual size even for a hypertrophied specimen. The skin is very much thickened, and so is the mucous membrane. In fact, it might pass for the hypertrophied prepuce of a man rather than that of a child 9 months old. Dr. Allan says there was no evidence of inflammatory action, but beyond this there is no history of any kind. It is said, however, to have appeared suddenly, and that previously the penis was of a normal size. Cases in private practice of swollen prepuce are, I think, much less common than they used to be. Nurses are now more careful as to cleanliness than formerly. In such a case as this, operation was, of course, the only remedy. But all pathological specimens would be more instructive if more details could be given about the living subject.

The Treatment of Laryngeal Phthisis.

Mr. RICHARD LAKE read a paper upon this subject which is published in full on page 73.

The following discussion then ensued:—

The PRESIDENT: I should be glad to know whether the forceps which Mr. Lake has shown us are his own invention.

Mr. McAdam Eccles: I would like to ask Mr. Lake in what solution, and in what strength, orthoform is used in ulceration of the larynx. I can personally say that orthoform acts on the nerves of the abdominal wall as an anæsthetic, but this anæsthesia does not seem to last for much longer than about eight hours. Has Mr. Lake found that orthoform acts in any way as a curative reagent in laryngeal tuberculous ulcers? I found in myself that the contact of orthoform with stinking pus gave rise to a decomposition, with the setting free of iodine, and I came to the conclusion that it will act as an antiseptic, although this has not been very generally accepted as proved.

Mr. Brindley James: I should like to hear from Mr. Lake what quantity of fluid he is in the habit of injecting into the larynx in cases of laryngeal phthisis.

Mr. T. R. Atkinson: The treatment described by Mr. Lake is very suggestive. I imagine the disease is rarely purely local, and one would like to know what proportion of the cases treated seemed to be really cured; and also, whether there had, previously to treatment, been much loss of voice, and if the voice returned. And again, if any effect was produced upon the condition of the chest. So far as my limited observation goes, the disease of the larynx has a close relation to the state of the chest.

Mr. Lake: The joint of the forceps was copied from Grünwald's. Orthoform is now believed to have no real antiseptic power, and the duration of the anæsthesia varies. Some observers, as Lichtwitz and Yonge, give as long as twenty-four to forty-eight hours, but I have not observed more than twelve hours' anæsthesia. The effect is obtained by the drug being dissolved in the fluids of the body, and ceases when the supply of powder ceases. I am unable to report any direct effect on the lungs from the injections. I believe that the amount injected might be much increased. As to the effect of treatment on the voice, if there has been genuine destruction of the cords the voice will not recover its normal tones.

Two Cases of Optic Neuritis associated with Mastoid Disease.

Mr. J. R. Lunn read a paper with the above title, which is published in full in the Mirror of Practice (see p. 124).

The following discussion then took place:—

The President: I am sure that we are greatly obliged to Mr. Lunn for his account of these very interesting cases. It is difficult to understand why optic neuritis should have occurred in these cases, since the lateral sinuses do not seem to have been involved.

Mr. LAKE: I have seen optic neuritis in a sclerotic case which disappeared on the mastoid antrum being opened; cases in which the sulcus lateralis is involved might have a little patch of meningeal inflammation over the tegmen tympani. This is relieved by the local abstraction of blood and removal of the cause, but these cases could hardly be said not to have reached the interior of the skull.

Dr. RAYNER BATTEN: I should be glad to know the character of the optic neuritis in these cases:—(1) Was there much swelling of the optic discs? (2) Were there any hæmorrhages? (3) Was the neuritis followed by atrophy? There are various degrees of neuritis, and it is often impossible to determine ophthalmoscopically in certain cases whether the optic neuritis is present or not. Optic neuritis occurs at times without any evidences of cerebral or constitutional disease, and I have found slight forms of optic neuritis apparently associated with disease of the ear and throat. I believe that there exists a relationship between diseases of the ear and certain conditions of the eye and orbit, although the explanation of this relationship on any anatomical basis is certainly difficult. I have seen cases of œdema of the lids and orbit, œdema of the conjunctiva, disease of the vitreous, and yielding of the sclerotic, giving rise to myopia, all associated with disease of the ear; and I believe that optic neuritis, or at any rate œdema of the optic nerve, resembling optic neuritis, may be due to the same cause, and that such a condition does not necessarily indicate any actual intra-cranial disease.

Mr. LUNN: I quite agree with Mr. Lake it is a difficult question to understand the connection between mastoid disease and optic neuritis, and that is the reason why I brought these cases before the Society. I am much indebted to Dr. Batten for his kind remarks, and agree with him that it is a difficult problem to solve the cause of optic neuritis in some cases. My cases had no hæmorrhages, only swelling of the discs. The vessels running downwards were interrupted in their course.

A Series of Twelve Tracheotomies for Laryngeal Diphtheria in Young Children, with Nine Recoveries.

A paper on the above subject was read by Dr. James Allan, and is published in full on p. 81.

The following discussion then ensued:—

The PRESIDENT: I congratulate Dr. Allan on the brilliant results he has obtained. If all the cases operated on were indeed instances of true diphtheria, I think that 75 per cent. of recoveries is extraordinarily good. Is Dr. Allan convinced

that all his cases were suffering from true diphtheria, and were cultivations of the bacillus obtained?

Mr. J. R. LUNN: I am sure we all have been much interested in Dr. Allan's cases, especially on account of the ages and successes, but I was surprised to hear of so large a percentage of recoveries. I also thought the doses of the antitoxin were large; I generally prefer small doses—10 cc.—given frequently.

Mr. R. W. LLOYD: The tracheal dilator shown by Dr. Allan seems to be a very useful one, and the tracheotomy tube which he showed, and which, by inserting the plug in it, allows of articulation, is a great advantage. I should like to know whether Dr. Allan has formed any opinion as to the frequency of post-diphtheritic paralysis after treatment by antitoxin.

Mr. T. R. ATKINSON: Dr. Allan is to be congratulated on his remarkable success. I learn that not only have his cases of tracheotomy shown 75 per cent. of recoveries, but at the Isolation Hospital to which he is attached there have only been three deaths from diphtheria in two years with fifty-five cases. The way he has narrated his methods is clear and instructive. I have no reason to dispute his diagnosis, and I regard his success as phenomenal. The rate of mortality from diphtheria is on the decline generally, the proportion of recoveries is now much higher. This is attributed to the use of antitoxin; and in reference to the query of Mr. Lloyd, I may say that in all the cases treated with antitoxin that have come under my notice, some paralysis has been left and the convalescence has been slow, certainly not rapid. This applies to adults as well as to children. As regards adults who have had the antitoxin, they generally expressed their dislike to it, but they think that it may have helped their cure. Almost all serious inflammations of the throat with fever are now regarded as suspicious and as possibly diphtheritic, and, so, many mild cases are included in the reckoning. But if tracheotomy is to be performed one would like it gone about in the business-like, prompt manner described by Dr. Allan.

Mr. MCADAM ECCLES: I would like to ask Dr. Allan what point or points he considers indicate the necessity for early operation. It has been my practice to advise early tracheotomy in young children in cases where there is a moral certainty that diphtheria is present, and even before a bacteriological examination has been made. In patients below the age of two years it is almost impossible to expect a satisfactory result if the child has to contend against the double foe of dyspnœa and toxin. In an adult, on the other

hand, I do not think it necessary to open the trachea until distinct difficulty of breathing is in evidence, and unless a bacteriological examination has put the diagnosis on a certain footing. I too was somewhat surprised at the large doses of antitoxin employed, and can bear out Mr. Lunn's views as to the benefit derived from small doses in the early stages.

Dr. ALLAN: I have to thank you for the kind remarks which have been made regarding my paper. I shall endeavour to answer each speaker in rotation.

In reply to your question, Mr. President, there was no bacteriological examination made in any of the twelve cases. In all of them the symptoms left no doubt as to the diagnosis. Membrane was clearly visible in each of the throats. Mr. Lunn seems to think the dose of antitoxin very large. I might say that I am not responsible for the dosage, being only concerned with the surgical part of the treatment; 1,500 units is the usual dose injected on admission, followed by a similar dose twenty-four hours afterwards, if necessary. I have not known of any case of collapse or other serious symptom following such a dose. It appears to me that a small dose of antitoxin that will cure on the first day of the disease is quite useless on the third or fourth day when the toxin has reached the cell tissues. I am glad that he agrees with me as to the advisability of early operation, and like him, I should not delay having my own trachea opened, were I suffering from laryngeal diphtheria. Dr. Gibbs mentioned two cases in which he operated after the patient had ceased to breathe, one of which lived for several days and the other did not survive at all. I am pleased to say that my case was more fortunate. The child is alive and well at present. He also advocates intubation in preference to tracheotomy. I have tried the operation in several cases and am sorry I cannot agree with him. The tube is difficult to introduce in small children, and even after it has been inserted it is liable to be coughed up at any moment, requiring the surgeon to be always at hand. It prevents the coughing up of any detached pieces of membrane, as the opening in the tube is small. Where there is a large amount of membrane in the passages it is liable to be pushed further down by the end of the tube on insertion, thus making matters much worse. Mr. Lloyd asks whether in all cases the tube I have shown enables the patient to speak with the tube *in situ*. In all cases in which I have used it I have found the child able to speak distinctly. He also asks about the frequency of post-diphtheritic paralysis. I am pleased to say that during the two years covered by the paper there has not been a single case of paralysis. This, I think, is largely due to antitoxin. In reply to Dr. Atkinson,

I can say that the cases were not selected ones, but were the eleven worst cases admitted. The three deaths following tracheotomy were the only deaths that occurred from diphtheria in the hospital during the two years. In reply to Mr. Eccles, my chief reason for advocating early operation is that in all cases where the diagnosis of laryngeal diphtheria is made, the patient has two deadly toxins to fight against. Operation immediately frees him of one of them (CO_2) and leaves him only the diphtheria toxin to combat. One toxin at a time is quite enough for the patient, and that we may fairly hope to overcome by the use of antitoxin.

Ordinary Meeting.—February 3, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

The Treatment—Medical and Surgical—of Acute Inflammation of the Vermiform Appendix.

A discussion was opened upon this subject by Dr. Seymour Taylor and Mr. McAdam Eccles, whose remarks are published on pages 89 and 94 respectively.

The discussion was continued by the following :—

Dr. DONALD HOOD : I think we must all deplore the difference of opinion which exists at the present day as to the treatment of typhlitis—I use the term in its generic and inclusive sense. We shall find that there is but little, if any, disagreement as to the physical conditions underlying these local inflammatory seizures. Some may doubtless consider the appendix *per se* as taking a larger share in the causal phenomena of the attack than others, who regard the cæcum as being probably the seat of the inflammatory lesion in many cases which run a benign course. But with regard to treatment, we must choose between those who counsel operative measures as soon as a diagnosis of typhlitis is established, and those who feel that under an appropriate medical treatment an overwhelming majority of patients make a complete and perfect recovery. We shall all agree that the disease comes before us as an example of one of three great groups: as a sudden general peritonitis directly due to perforation of the appendix; as a local inflammation limited to the right ileo-cæcal fossa, terminating after an illness more or less prolonged in resolution; and as a local inflammation accompanied or followed by suppuration.

The first group I do not intend to discuss; in many ways they are on all fours with cases of gastric or duodenal perforation. There cannot be a question as to the uselessness of any medical treatment. The sooner the patient is placed

in the hands of a surgeon the better will be the chances of recovery. We must confess that at best such cases are among the most dangerous class, and carry an appalling mortality.

We must acknowledge that with regard to the initial onset we are absolutely unable to differentiate between those cases in which the inflammatory lesion gives rise to suppuration, and those in which the cause of the disease is more benign, the attack ending in resolution. There is, I say, no pathognomic symptom which enables us to distinguish between a suppurative and non-suppurative appendicitis.

If we take a large number of cases as admitted into a London Hospital, we shall find that the greater proportion end in recovery; thus of 308 patients admitted in Guy's 227 made a good recovery. Naturally hospital cases are the worst we can find; we must class all together, and many apply for relief at the end rather than at the commencement of illness. But if under such adverse circumstances we find an enormous proportion of cases getting well under a simple medical treatment, *a fortiori* in private practice our successes should be greater. Such successful issue, I believe, will depend entirely upon early diagnosis, and as early, rational treatment. Diagnosis will not be early, will not be correct, unless we are fully alive to the important fact that the primary symptoms vary enormously as regards intensity. One case within an hour or so of onset may be marked by symptoms of the utmost severity; in another the initial symptoms may be but slowly ingravescent and have but little to suggest that the attack is more than a simple gastric derangement. One patient will be constipated, another have continuous diarrhœa. Vomiting may be a prominent feature or altogether absent. From the very first there is invariably one symptom, I would urge the crucial symptom, present—pain over the affected area. It may be very slight, not more than a local discomfort, but careful examination will scarcely ever fail to discover this all-important sign. Accompanying the pain there is in the larger number of cases a rise of temperature. The temperature need not necessarily be high; in the mildest form of the disease it will not exceed 99°. Pain in the right ileo-cæcal fossa complicated by rise of temperature should at least put us on our guard, and by recognising the primary symptoms of the attack, we may often be able to save our patients from a long and serious illness.

I believe the rational treatment to be that of giving absolute, complete physiological rest to the part affected. The patient should be kept to bed, fed only on simple liquid food, have no aperient remedy of any sort or kind, and be placed from

the first moment under the influence of opium, the amount of that drug made use of being proportional to the exigencies of each individual case. I consider that solid opium is better than subcutaneous medication.

With ordinary discrimination and judgment I have never seen harm follow such a course of treatment. Very early in my professional life I was brought much in contact with the late Sir William Gull. A more successful physician never lived. He invariably followed the general principles of treatment I have alluded to. I have witnessed, I may say without exception, the very best, the most satisfactory results when such treatment has been adopted from the first, and I have yet to learn that any other method of procedure is comparable as regards the favourable results which attend such a treatment of typhlitis when seen at an early stage of the inflammatory seizure, for not only does such treatment tend towards promoting resolution of the inflammatory mass, but should suppuration eventually result, a firm band of adhesions will limit the suppurative area and so lessen the terrible risks of a general peritonitis.

Mr. Keetley: The removal of the appendix vermiformis from a patient who is free from abscess and fever at the time is one of the safest operations in surgery. The operator should be a surgeon of experience, because curious complications are sometimes met with. For example, here are two appendages; one is intussuscepted into the cæcum, the other has a cyst, probably the remains of an abscess, adherent to it. In another case I could feel the appendix, but could not see it, because the peritoneum passed like a sheet from the cæcum to the ilium over it, and not around it. But generally the operation is very simple. I have seen no fatality, indeed no dangerous symptoms, and no hernia after it in my own practice, or in that of any other surgeon I have had the opportunity of watching.

In the class of uncomplicated abscesses operated on without removal of the appendix, I have seen uniformly good results, with one exception. In this case the patient, a very cadaverous, unhealthy-looking man, died of secondary hepatic abscesses. On the other hand, I have seen a man with a temperature of 104°, a distended abdomen, and vomiting, take an immediate turn for the better when I had worked my way in the iliac fossa to his appendix and let out nothing but a putrid odour; not a drop of pus was noticed till the next day. A fæcal concretion escaped. I am opposed, as a general rule, to removing the appendix while fever and abscess are present, and think the arguments of those who hold a contrary view fallacious.

With regard to the worst cases, those in which general septic peritonitis complicates a perforated or gangrenous appendix, I have operated on and lost three of late years, and others doubtless in the epoch when the very frequent connection of general peritonitis with appendicitis was not known. Perhaps I should say four, as another case died on the table immediately after I had made a small opening in the middle line. He was all but moribund before operation, and a very little chloroform proved too much for him. I removed the gangrenous appendix after death to verify the diagnosis. In none of these cases did I see the patient before, at earliest, the fourth day. Anti-streptococcus serum should be used if streptococci are found.

It is so difficult, if not impossible, to say of any person subject to appendicitis, whether his future attacks will be benign or malignant, and removal of the appendix is so safe when carefully and properly done (as I said before, by an experienced surgeon), that I grow more and more of opinion that the more ready we are to advise operation the less will become the per centage of deaths in statistics embracing all kinds of appendicitis; and I am well aware that the great majority of attacks of appendicitis recover under expectant treatment. I even believe that most would recover if absolutely neglected, just as many catarrhs do elsewhere.

The worst cases are apt to be regarded as, primarily, examples of intestinal obstruction, and time wasted in watching them and treating them "medically," an injustice to medicine. Surgical procedures are required early in these cases, even for purposes of diagnosis.

Mr. L. A. Bidwell: With the exception of the so-called fulminating variety of appendicitis I am inclined to think that, in nearly all cases in which fever and an inflammatory swelling is present, a small abscess forms about the appendix within the first few days of the commencement of the attack. Now this small collection of pus immediately follows perforation of the appendix, and corresponds to a fall of temperature which is seen in most temperature charts in cases of appendicitis. Three courses may now follow: either fresh adhesions form which shut off the region of the cæcum from the general peritoneal cavity; or the appendicular abscess may burst directly into the peritoneal cavity producing acute general peritonitis; or thirdly, the pus in the appendicular abscess may become inspissated, and the attack subsides without surgical treatment. This theory is the result of observations made during operations in the various stages of the disease, for I have found a small abcess about the appendix, containing about half an ounce of pus, in every case in

which I have operated within the first two or three days of the attack, and in all cases of perityphlitic abscess which I have opened I have found an opening at the bottom of the big abscess leading to another smaller sac which contained the appendix. Again, in cases of general suppurative peritonitis —of which, I am sorry to say, I have seen a large number—I have found the appendix in a small sac with an opening into the general peritoneal cavity; and lastly, in most cases of operation for recurrent appendicitis I have found the appendix surrounded by granulation tissue. Now the risk to the patient is, in my opinion, least when an operation is done within the first few days of an attack. Under these circumstances, the appendix can be removed, the little abscess carefully cleaned out, and the abdominal wound closed, with the exception of a very small opening for a gauze drain. The patient will probably be well within a month; in fact, the last patient on whom I operated left the hospital within three weeks with the wound soundly healed. I am inclined to think that when a large perityphlitic abscess has formed, the patient runs a greater risk, since he may succumb to septic absorption or to exhaustion; and when there is general peritonitis, the condition is one of the gravest with which a surgeon has to deal.

When we consider the almost hopelessness of this termination of appendicitis, and also the risk of recurrent attacks in cases in which no operation is carried out, I am inclined to think that an operation should be performed in the beginning of the attack, and I have selected a time when the temperature falls. I know that this will not meet with the approval of most surgeons, but I have been led to form it from the safety of operations at this period, and from my experience of the hopelessness of most operations in general suppurative peritonitis. A short time ago I had to operate, within a couple of months, on six cases of general peritonitis from appendicitis, and the fact that none of these recovered has, more than anything else, made me advocate early operation.

With regard to the removal of the appendix during an operation, I cannot agree with Mr. Eccles's advice, and except in cases of acute general peritonitis, where the patient is practically moribund, I always remove the appendix. In the first place, a sinus often remains for a long time when the appendix is not removed; and, in the second place, I have known at least two cases in which, after simple incision of a perityphlitic abscess, a second attack of appendicitis followed by an abscess has occurred.

I might just mention two rather unusual cases of perityphlitic abscess which have been under my care. In the

first, the abscess formed in the middle line of the abdomen, and the iliac fossa was quite empty; in the second case, after incision of a perityphlitic abscess and removal of the appendix, a large round worm was found in the dressings on the third day. Both cases recovered. Lastly, I would mention that many foreign surgeons object strongly to the term "appendicitis," since it is a compound of a Latin root with a Greek termination; and further, it does not indicate that the cæcal appendix is involved. It has therefore been suggested that "epityphlitis" would be a preferable name; but I am afraid that there is not much chance of changing it now.

Dr. H. A. Caley: In considering the treatment of appendicitis it is essential to bear in mind that we have to deal not with a defined morbid entity, but with a group of conditions ranging from acute perforative appendicitis with diffuse septic peritonitis, at one extreme, to mild attacks of catarrhal or parietal appendicitis, with strictly localised inflammation capable of undergoing rapid resolution, at the other. It follows from this that the principle which underlies all rational treatment is that the mere diagnosis of appendicitis or perityphlitis is not a sufficient ground on which to base treatment; and it appears to me evident that it is mainly owing to the lack of differentiation between the several groups of appendicitis that so much uncertainty as to prognosis exists, and that such widely divergent views as to treatment prevail. If a large series of cases be taken, careful differentiation demonstrates conclusively that (1) when there is diffuse peritonitis the mortality is very high (80 to 90 per cent.); (2) when there is local suppurative peritonitis the mortality is high (20 per cent. or more if surgical measures are unduly postponed); (3) when the condition is one of simple perityphlitis or appendicitis, *i.e.*, appendicitis with localised adhesive peritonitis, the mortality is very slight.

It is further shown that the two first groups are associated with the more severe appendix lesions, perforation, ulceration or gangrene, which lesions possess in greatest degree the property of peritoneal infectivity, setting up either a diffuse septic peritonitis or local suppuration; while in the third group, simple perityphlitis, including many of the "relapsing" cases, the lesion of the appendix is of a milder or less infective nature, *e.g.*, parietal appendicitis, concretion without ulceration, stenosis or other lesion occluding its lumen. The importance of a sufficiently comprehensive survey is shown by the following illustrative series of 100 consecutive cases occurring in the medical and surgical wards of St. Mary's Hospital, of which I have notes. Sixty-three were treated "medically" with 2 deaths, and 37 "surgically" with

11 deaths, a striking inequality attributable to the relative mildness of the cases treated throughout in the medical wards and the relative severity of those which required surgical measures. By dividing the cases into their respective groups it is seen that the mortality was approximately 80 per cent. when there was diffuse peritonitis, 20 per cent. in those with local suppuration, while there was not a single fatal case when the condition was one of simple appendicitis, *i.e.*, without diffuse peritonitis or local suppuration. It is noteworthy that in every one of the fatal cases the appendix lesion was of a severe type, either perforation, ulceration, or gangrene.

Corresponding with this differentiation into several groups on pathological grounds we can group the cases in relation to treatment.

It is now generally recognised that surgical measures are imperatively demanded in the treatment of the following three groups of cases:—

(1) Appendicitis with diffuse peritoneal infection—actual or threatened. In these cases the appendix is usually ulcerated, perforated or gangrenous, and the obvious indication is to remove it, and to cleanse the peritoneum in so far as is practicable.

The mortality in this group is still lamentably high, mainly owing to the virulence of the infection and the delay in undertaking the operation, but with increasing recognition of the importance of the early diagnosis of appendicitis, and of the highly important part which the appendix plays in the causation of peritonitis, especially in young subjects, we may look for better results.

(2) Appendicitis with local suppuration resulting in perityphlitic abscess. Here operation is no less imperative than in the preceding group; but the need for haste is not usually so urgent, inasmuch as the mischief is localised by limiting adhesions. It is, however, essential that the diagnosis of suppuration should be made at the earliest possible moment—to wait for the more obvious signs of abscess formation may be to run a grave risk.

(3) "Relapsing appendicitis," in which, despite appropriate prophylactic measures, relapses repeatedly occur. In these cases the removal of the appendix during the quiescent period is usually attended by satisfactory results.

Practically, however, the question as to medical or surgical treatment is not quite so straightforward, owing to one great uncertainty in prognosis. I refer to the difficulty in certain cases of ascertaining at the outset the severity and probable course of the appendicitis, whether it will settle down into a mild case, whether it will go on to suppuration, or whether

it will result in diffuse peritonitis. It appears to me that we shall meet this difficulty by adding to the three preceding groups for which, on definite pathological grounds, we have advocated operation, a fourth group of borderland cases.

(4) Acute cases of appendicitis other than those accompanied by definite evidence of general peritonitis, in which the acuteness of the onset, the severity of the initial symptoms, and the general condition, point to severe lesion, although it may not be possible, thus early, to estimate its real gravity. Under such circumstances the risk of operation in skilled hands is unquestionably less than the risk of delay, and I am strongly of opinion that due attention to this group of cases and the recognition of the advisability of early operation in their treatment will do more than anything else to determine a rational *via media* between extremes of treatment—indiscriminate surgical treatment on the one hand, and undue hesitation as to operation on the other. It cannot be too much emphasised that within the first twenty-four, forty-eight or seventy-two hours, the all-important question in a given case is as to the danger of diffuse peritoneal infection; so long as the peritonitis is strictly localised there is not the same urgency, and the subsequent course will decide as to the existence of local suppuration.

Much has been said as to the uncertainty or impossibility of prognosis; but while fully admitting the essentially treacherous nature of appendicitis, it is my conviction that a comprehensive and critical survey of all the clinical features usually does enable us to differentiate between those cases in which the peritoneal infection is relatively localised and those in which it is relatively diffuse; and this is the essential point in deciding as to treatment in the early stages. To do this we must note accurately the severity and distribution of the pain, the presence or persistence of vomiting, the temperature, taken in conjunction with the frequency and characters of the pulse, the aspect and general condition of the patient, the extent and degree of local tenderness, muscular rigidity, and dulness, any impairment of diaphragmatic respiration, and the character of any tumour or deep-seated swelling, bearing in mind, in the latter connection, that in many of the worst cases the local signs in the right iliac region are relatively in abeyance.

If on these lines we select the more severe cases for surgical treatment, the absolute majority of all cases, something like three-fourths, will still remain for "medical" treatment. Time will not admit of my entering upon the important details concerned; but I may remark, in reference to the questions that have been raised respecting the use of opium, that the

safe rule is to give it for the relief of pain or other special symptoms, and to discontinue it as soon as the indications which called for its administration have ceased to exist.

Mr. BOYTON: As a general practitioner I have found the administration of enemata of warm olive oil to be of the greatest service in cases of appendicitis, but unless a thoroughly trustworthy nurse can be obtained I strongly recommend the medical man to inject the oil himself. After, perhaps, several injections the patient generally expresses a sense of relief, and the symptoms subside. In my experience, if the stools be carefully examined after the attack, it is possible to find a hard fæcal accumulation or some portion of undigested food. The only cases going on to suppuration which I have seen have been those in which medical treatment had been neglected till too late to be of any avail.

Dr. TOLCHER ECCLES: On seeing that so many of my old teachers were taking part in this discussion, I felt I must come up from Brighton, as I have lately had several rather interesting cases under my care. Of these I will bring under your notice the following three:—

I.—A gentleman who, thirty years ago, had in the course of twelve months three distinct attacks of appendicitis, but with careful diet, &c., has since had no return.

II.—A man who, only a few days ago, came into my consulting room with an enormous anterior abdominal rotundity, so large that it reminded one of the appearance of a woman nine months pregnant. On examination I found that the tumour was due to a great pad the man was wearing to support his bowels, which protruded through a lateral incision which had been made for the removal of his appendix. I should like to know if this terrible state of affairs often follows this operation.

III.—My third case is that of a wealthy gentleman, aged 45, suffering from aortic stenosis, which is beginning to tell upon him. Last winter he was yachting in the Mediterranean, and had an attack of what he called Roman fever (? an attack of appendicitis); in the summer he gives a history of a similar attack accompanied by ptomaine poisoning; one month ago he had a distinct attack of appendicitis. I treated him in the way suggested by Dr. S. Taylor, but gave larger doses of opium. I distinctly remember Dr. Donald Hood telling me, when I was his house physician, that very often in abdominal cases not sufficient opium was given. After seeing the patient I met one of the great Society ladies of the neighbourhood; she immediately said: "Oh, Dr. Eccles, I am surprised you have not had the appendix removed at once; all the young men in America about to travel now have this

operation done before starting." I should like to ask if, with a heart in this condition, the risk of the operation and anæsthetic is not greater than the risk run of a future attack.

I think we all have been much interested in the discussion to-night. Having seen many obscure cases of appendicitis, I should like to say how very important it is to have those cases with abscesses carefully removed to the hospital from their own homes, as I have seen a case which died from the result of removal, as the *post mortem* proved. I remember another case of a boy whom it was hard to say whether he had typhoid fever or appendicitis. After examining him by the rectum, the boy died from the results of a local abscess round the appendix, as shown by the *post-mortem* examination. It is very evident that these cases must be handled with care. I have seen another case in a boy where the local abscess burst into the cæcum and the boy got perfectly well, and has had no trouble since. Yesterday I saw a remarkable case at a *post mortem*, the appendix was the size of one's middle finger, in a boy two years old; it was blocked with tuberculous masses and ulceration; similar ulceration was found also in the ilium and cæcum. The child showed no signs of any appendix trouble during life.

In conclusion, I was rather surprised to hear so many speakers prescribe so much opium, as I am sure the symptoms are masked when it is given, and it is so important to diagnose the disease early. I am a great believer in the old-fashioned ice bag applied to the abdomen in the early stage.

Dr. Leonard Dobson: Speaking as a general practitioner, and excluding the cases of acute general peritonitis, which obviously should be placed in the hands of the surgeon at the earliest possible moment, it seems to me that the question is: Are we to recommend operative treatment or not? My experience has been, with a fairly large number of cases, that if you place your patient on opium at once, avoid all purgatives, give a restricted diet and keep them absolutely at rest, the very great majority will get absolutely well. You will of course meet with a case now and then that will present grave symptoms, and I agree with Dr. Caley that we must then arrive at an opinion as to the necessity of operation, by a careful consideration of the facial aspect of the patient, the rapidity of the pulse and the rise or fall of the temperature; but I repeat that opium and rest will suffice for the great majority of the cases. I think, also, that it is desirable in many of these cases, after the patient has convalesced, that he should be informed of the risk he runs of a recurrence of these symptoms, and that he should be advised that removal

of the appendix can be undertaken with very little risk, and that he will then be freed from the danger of any future relapse.

Dr. SEYMOUR TAYLOR: In reply to Dr. Caley, I carefully pointed out that in some cases no tumour forms, but that perforation occurs rapidly and almost before a diagnosis can be made. The dose of opium which I give is gr. $\frac{1}{8}$ to gr. $\frac{1}{3}$, frequently repeated.

Mr. MCADAM ECCLES: I venture to think that we have not lost by the discussion that has occupied our attention to-night. These cases of appendicitis are so common, and may be so dangerous, that even a review of the well-known lines of treatment cannot be without its benefit; but we have gone further and have expressed opinions that show that we have looked at the subject from a modern point of view. Mr. Keetley's remarks are specially valuable. Relapsing appendicitis is so frequent that it should assuredly determine an operation, and I agree with Mr. Keetley that the removal of the appendix during the period of quiesence is one of the safest in abdominal surgery. I would, however, desire to sound a note of warning, and it is this, that sufficient time, with appropriate medical treatment, should be allowed to elapse between the acute attack of inflammation and the excision. I consider that at least six weeks, after the return of the temperature to normal, should go by before the laparotomy is performed. I further think that such a removal of the offending organ will in most instances completely relieve the patient of the distressing return of the symptoms, so graphically described by Dr. Hood. I entirely agree that if one is fairly certain that a case of general septic peritonitis is the outcome of appendix trouble, then it is advisable to make the incision primarily over the region of the appendix.

Mr. Bidwell has alluded to the fact that pus is very frequently formed, in fact, that it is the rule for it to be produced. Without traversing the correctness or not of such an opinion, I still believe that even if it were always the truth, that this does not necessarily mean that an operation is called for in every instance, and that certainly not so early a one. Dr. H. A. Caley has given us a very interesting series of statistics, and they seem to my mind to go to prove that early diagnosis is essential if we would have satisfactory results from acute inflammation of the appendix. Dr. Caley has asked me concerning the use of the exploratory needle. I can only say that I have myself seen one case in which it was employed, and know of two others in which its use was suggested.

I think that Dr. Caley agrees with me that operation on

the second or third day is not, in the majority of cases, advisable, if a long series of instances are taken. The lumbar incision as a primary one is perhaps desirable in a few cases, but as a rule I prefer to start with the inguinal incision. The former is, of course, of great use as a counter-incision.

I only make the incision in the middle line of the abdomen in cases of doubtful diagnosis in instances of general peritonitis, with signs of intestinal obstruction, and in such I always immediately explore the region of the appendix with the finger. In many cases the incision directly over the site of the appendix is undoubtedly the correct one to employ.

Dr. Tolcher Eccles has alluded to three interesting cases, and one that may be met with in every-day practice, but they are none the less important. That several attacks of inflammation may occur, and then that a complete cessation of them ensue, is a well-known fact, but it is unfortunately impossible to say which cases will end thus. The second case he alluded to was one in which if a suitable truss, such as I have shown to-night, had been worn in the early stages of the protrusion, it is not likely that the condition would have advanced to the stage that he reports it to have reached. The third instance is one in which I think that the patient is probably safer retaining his appendix than in having to run the risk of its removal. The remarks as to the necessity of caution in the transport of persons the subjects of appendicitis, should such be necessary, are of the greatest importance. In my own case I think that a journey from the East Coast had perhaps the effect of aggravating my disease, and in possibly determining the suppuration. In conclusion, I have to thank you for the very kind way in which you have received my remarks, and to say that I appreciate your good wishes on my restoration to health after an attack of acute appendicitis that required surgical treatment.

Clinical Evening.—Friday, March 3, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

A Case of Locomotor Ataxia in a Woman.

Dr. ANDREW ELLIOT: This woman, aged 46, has had three children, all healthy, and now aged 20, 16, and 9. She has had one miscarriage at the ninth month, six years ago. There is a history of recurring "sore-throat," with loss of hair, but apart from these symptoms no definite history of syphilis. The first symptoms of her present trouble commenced five years ago, with lightning pains in the legs,

followed a year later by vertigo (? inco-ordination). Her present condition is one of typical ataxia.

Motor functions.—Gait characteristic, marked inco-ordination in the legs and arms. No muscular weakness save in the flexors of the wrist and fingers.

Sensory functions.—Paræsthesiæ (needles and pins) in the hands and feet. Lightning pains in the legs; girdle pain. No areas of hyperæsthesia. Anæsthetic areas: (1) a zone over the front of the chest corresponding to the fifth and sixth interspaces; (2) over the distribution of both the ulnar nerves; cutaneous sensibility to tactile, painful sensations, and to heat and cold distinctly diminished, especially in the legs. Delayed transmission of sensory impressions marked. The soles of the feet are partly anæsthetic. The patient feels as if "walking on cotton wool," and has some difficulty in distinguishing between carpet and bare wood. Knee-jerks absent.

Ocular symptoms.—(1) Spinal myosis; (2) Argyll-Robertson pupil; (3) very slight optic atrophy. No ocular palsy.

Visceral functions. — Attacks of difficulty of breathing, apparently referable to diaphragmatic "crises." The bladder and rectum are affected—incontinence alternating with retention. Muscular sense is apparently normal. The patient complains of "giddiness," and has fallen in the street on several occasion, but this is probably due rather to the ataxia than to true vertigo.

Mr. WILLIAM JOHN: I would like to ask Dr. Elliot whether there is more definite history of syphilis in most cases of ataxia in women than there is in this case.

Dr. ANDREW ELLIOT: I do not think that the history of syphilis is often more pronounced than it is in this woman.

A Survivor from the Faversham Detonator Explosion.

Mr. MCADAM ECCLES (for Dr. G. P. Shuter): This woman is shown because the injuries that she has received are unusual, and because it does not fall to the lot of most of us to see the results produced by the explosion of high explosives. She, with three others, was at work on September 2, 1898, in a wooden shed containing 1,000 detonators at the Faversham Cotton Powder Works. Two of them were testing the electric wires attached to the detonators; this woman and another were tying them up in bundles of thirteen. One of the detonators while being thus tested exploded, thereupon 500 out of the 1,000 went off sympathetically. At the time this woman was holding twenty-six detonators in her left hand over her left thigh. These all exploded, shattering the hand, and blowing a large hole in the thigh. Two of the women died, all were blinded, and all were peppered from head

to foot with small particles of copper and fragments of wire, as you can see for yourselves in this patient. In her case the scars are very pronounced and numerous, and yet she was the least bespattered and marked of them all. The force of the explosion may be estimated by the fact that the small portions of the thin copper casing of the detonators were driven through the whole thickness of her clothing into the skin of the chest and back. After the accident many fragments of metal were picked out of the skin, and from that time to this, particles of copper have continually been working out and appearing on the surface, and even now many small pieces may be seen embedded in the skin. (By means of the fluorescent screen, tested by Dr. F. H. Low, these particles did not throw any shadow.)

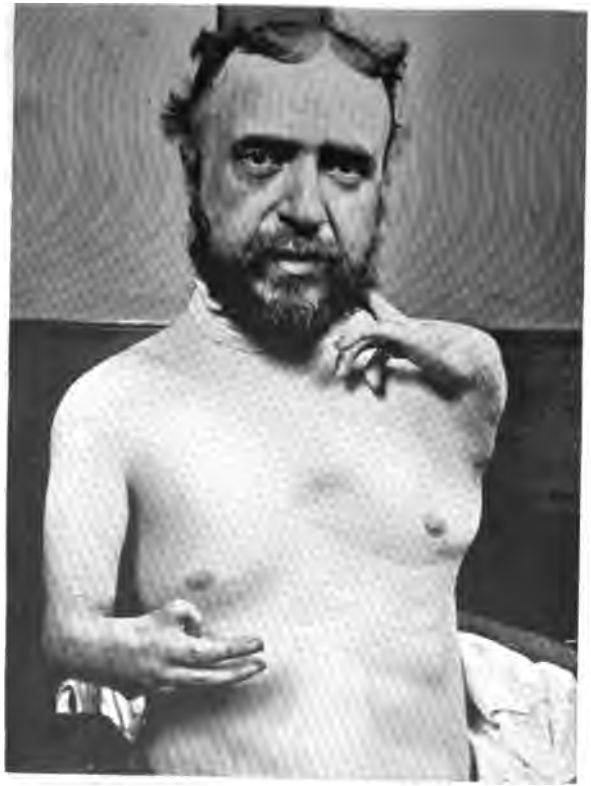
Congenital Deficiency of the Left Upper Extremity.

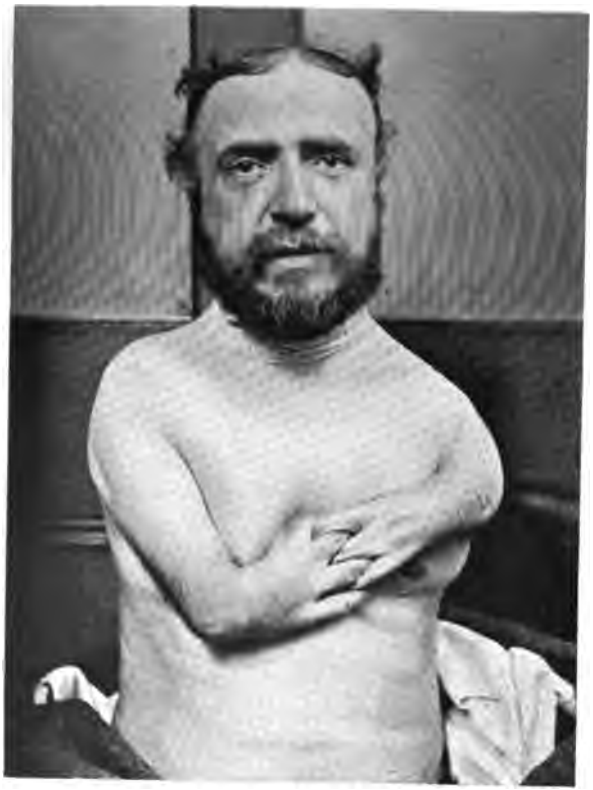
The PRESIDENT: I wish to show you the case of this young woman, aged 18, who presents a want of development in the left upper extremity. There is a history that her mother, when six weeks pregnant with her, was frightened by a man with one arm. She has, as you will observe, and as has been so well demonstrated by these beautiful skiagrams taken by Dr. F. H. Low, and also exhibited by him on the fluorescent screen, total want of development of the lower two-thirds of the ulna, carpus and metacarpus, and digits of the left upper limb—in fact, the radius and first metacarpal bone alone remain. I think that this condition is in all probability due to some interference with the function of the ulnar nerve or artery at the junction of the upper with the middle third of the forearm during intra-uterine life. There is no history of any other member of her family being afflicted with deformity.

Two Cases of Deficiency of Development of the Digits of both Hands and Feet.

Mr. ROWLAND POLLOCK: These two boys, aged 12 and 16, are also examples of congenital malformation or deficiency of development. The family consists of father, mother, and six children. The father and four of the children—these two boys, one brother and a sister—all present these deficiencies. In the father's case all the digits are absent except the little finger, and one of his brothers is similarly affected. Mr. Clutton, in Treves' "System of Surgery," says that sometimes there is an absence of the radius in these cases, and this being so, the hand, as it were, articulates with the lateral aspect of the ulna. The tibia is rarely wanting. In these cases shown to-night there is a good example of webbing in one boy, and both the feet in each case are markedly deformed.

Fig. 1.—Skiagram of Dr. S. D. CLIPPINGDALE'S Case of Deficiency of Development of Distal Portion of Upper Extremity.





Figs. 2 and 3.—Mr. McAdam Eccles's Case of Deficiency of Development of Proximal Portions of Upper Extremities.

A Third Case of Deficiency of Development in the Upper Extremity.

Mr. McAdam Eccles: I also have to bring before you to-night a case that I think is of interest, taken in connection with that shown by our President and with those brought forward by Mr. Rowland Pollock. This man presents a want of development of the right upper extremity which is evidenced by the following condition of the limb. His scapula, clavicle, humerus, and the parts of the radius and ulna at the elbow joint appear to be of fairly normal development, but the bones of the forearm are considerably shorter on the affected right side than are those on the normal left side. Both the radius and the ulna seem to be dwarfed. Then when we come to examine the hand, it is found to be in the state of contraction known as the claw-hand, and what is still further of interest, he has a total want of development of the digit known as the thumb, except that he presents a minute bud or protuberance at the spot where one would expect the first phalanx of the thumb to be. No other members of his family have, so far as he is aware, been the subject of any deformity.

I venture to suggest that all these four cases that are now before us are examples of arrest of development of the segments, one or another, of the limb buds. As to the causation of these conditions of want of development of the limbs, I venture to think that the cases should be looked at in two ways: first, those in which there is definite arrest of development, as in the President's case and my own; and secondly, as an arrest with abnormal development, as in the two cases—in fact, in the majority of the family—that Mr. Rowland Pollock has brought to our notice. In some instances, again, it would seem that the proximal parts of the primordial bud are those which have become the seat of the stunted growth. The photographs that I here send round are those of a man that I had under my observation some years ago, who presents a very fair development of the hands and carpus, but both his forearms are much shortened, and on the left side his upper arm, and also the whole of the shoulder girdle, is deficient. As is well known, the limbs appear in the fœtus as buds from the trunk about the fourth week, and very quickly the most distal part of the future limb becomes differentiated, fingers and toes first appearing; soon after a constriction appears at the site of the ankle or wrist, and later on another for the future elbow or knee, and shoulder or hip. Muscle and cartilage are both differentiated from the blastema before any formal cleft for the joints appears.

It would seem from this order of development that it would be more likely that parts that are separated last in order should be those that would most often be the site of deformity; and the photographs that I have sent round, I venture to think, indicate that this is what has occurred in this instance. But it is not what has happened in the cases that have been before us to-night. They one and all exhibit a deformity at the most distal parts of the limbs. There may be three theories advanced for the causation of this condition of distal deformities. The first is that which the President has put forward, namely, that the want of proper blood supply has led to the occurrence of the arrest of growth, but I hardly think that this can be a correct one, for the blood vessels are not as a rule in evidence as definite arteries to definite parts sufficiently early to allow of the idea that they can so influence the line of development. The second is that the arrest is the outcome of some nervous influence. This again I do not think has sufficient ground for support, for a like kind of deformity sometimes can be seen in the vegetable kingdom, in which there is no nervous system at work. The third theory is that in the instances like the one that the President has brought before us, there may have been an intra-uterine amputation of the distal portion of the limb. But I do not know of any genuine case where the amputated part has actually been discovered in the material expelled from the uterus. I fancy therefore that we are compelled merely to say that there has been some force at work on the original blastema which has led to the cells not dividing and subdividing in the manner that they normally should, and thus there has resulted an imperfect development. I own that this is but a lame way of explaining the deformity.

[All the four above cases were demonstrated by Dr. F. H. Low by means of the fluorescent screen.]

Dr. H. P. Potter: I ask Mr. Eccles if there were any evidence of heredity in this case. Inquiry has induced me to regard most deformities as unassociated with transmission. I had recently under observation a male adult with malformed forearm about three inches in length; this had four nipple-like prominences representing fingers which could be retracted or protruded at will. This condition did not exist in any other member of the family.

Mr. E. Percy Paton: About two years ago I had under observation an almost exactly similar case of so-called "lobster claw" deformity to that before us now. Reference has been made to various hypotheses as to the causation of these deformities, but no mention has been made of the belief, held by some, that the malformation may be explained by

supposing an irregular return to some ancestral type. I have never, myself, however, been able to follow the very complicated argument upon which this idea is based. To say that the malformation is due to some inherent inability to develop fully on the part of the original formative cells appears to me to carry us back a stage further in words but not in knowledge. The President's case looks at first sight like an intra-uterine amputation, but the presence, shown in the skiagraph, of a distal epiphysis, or separate piece of bone, and the deformity of the elbow joint, seems to militate against this view. As to the amputation hypothesis itself, the fact that the amputated part is not often found at birth is easily explained when one remembers how early the severance in all probability takes place, and how small and easily evacuated the part cut off would therefore be.

Dr. P. S. ABRAHAM: I should like to refer, in view of what Mr. McAdam Eccles has said with regard to intra-uterine amputations, to a specimen which was formerly under my care in the Museum of the Royal College of Surgeons in Ireland. It was of a fœtus of nearly full term, which had been the subject of undoubted intra-uterine amputation of one leg, which must have taken place at or about the fourth month, for the small foot was found, shrivelled and macerated, and it was afterwards suspended below the leg to which it belonged in the jar containing the fœtus. I believe that the specimen is still in existence in that Museum.

Mr. W. F. SAVERY: I have seen an infant born at full term with gangrene of the lower half of one leg. There was no history to be obtained as to the confinement, a midwife having attended. The limb was amputated just below the knee, and the patient recovered.

Mr. W. C. MUSSON: With regard to the amputation theory in these cases, there was living some years ago in the Hammersmith district, a man, beautifully built from head to heel, with the exception that his right forearm terminated three inches below the elbow in what might very well have passed for an amputation stump, had there not been on it three very small protuberances each bearing a nail.

A Case of Deep Sulcus above and behind the Manubrium Sterni.

Mr. BRINDLEY JAMES: I desire to bring before you to-night the case of a young man, aged 18, who is 6ft. 4in. in height, and who presents a deep sulcus, of acquired origin, above the manubrium sterni. The history of the condition is as follows: Three years ago a swelling spontaneously appeared just above the sternum, and became inflamed. After three

weeks the patient consulted a medical man, who passed a grooved needle into the tumour and drew off some pus; subsequently the abscess increased in size, and was opened. Afterwards it partially healed three or four times, eventually remaining as a discharging sinus, and lastly degenerating into the open cavity that you see now. The mouth of the aperture is about the size of a five-shilling piece, and is situated directly above the upper border of the manubrium sterni, but the cavity passes downwards behind the bone in a somewhat funnel-shaped form, and flattened from before backwards for the extent of about one inch.

Mr. McAdam Eccles: I think that the interesting case that Mr. Brindley James has so kindly brought before us to-night is the result of inflammation and suppuration in the structures found just about the upper border of the sternum. But as to the exact tissues in which the pus was formed, I think there must be some doubt. I hardly think that it is in connection with a thyro-glossal duct cyst, for it appears so very low down. Again, it might have had its origin in a cyst of the thyroid gland, and possibly even from a persistent thymus. Whatever its source, I fear that a plastic operation is not very likely to be a successful one, seeing the amount of traction that must inevitably be exercised upon the parts by the action of the sterno-mastoid muscles.

Mr. E. Percy Paton: I have had under my own care one case of persistent suppurating thyro-glossal duct, the opening of which was as low as the depressed cicatrix in this case. It seems to me, however, that its most probable cause has been suppuration in the lymphatic glands which lie between the splitting of the superficial layer of the deep cervical fascia, where it is attached to the anterior and posterior edges of the upper border of the sternum. The suppuration has, I think, to some extent destroyed this fascia, hence the want of support to the cicatrix and the deep depression. It does not seem to me that any plastic operation would be of much service, as it would not restore the support which the cicatrix requires to prevent the depression again recurring.

Case of Myxœdema.

Dr. Seymour Taylor: This patient, aged 50, a Bath-chairman, came under my care at the West London Hospital. He had all the characteristic symptoms and signs of myxœdema. There is general œdema of the skin. The features are broad, coarse, and puffy; the eyelids are transparent-looking; the mouth is widened, and its curves obliterated. There is a well-defined blush on the cheeks. The skin is cold, dry and furfuraceous; there is an absence of perspira-

tion and of sebaceous secretion. The hands are broad, clumsy and "spade-like." The nails are brittle, and the hair coarse and harsh, while on the scalp it is scanty, showing a wide parting. Cutaneous sensibility is blunted. The patient feels the cold acutely, and his temperature is subnormal. He is slow in his movements and in his mental processes. There is no albumen in his urine. I propose to treat him with thyroid tablets; and to show him again to the Society after a course of this treatment.

A Case of Nævoid Condition of the Penis and Scrotum.

Mr. McAdam Eccles: This man presents a well-marked nævoid condition of the scrotum and penis. The affection is congenital, and although nævi upon the external genitals are by no means uncommon, yet I think that such an excessive dilatation of the venous spaces as this patient has, is not by any means frequent. He avers that it only inconveniences him when the weather is hot, and that he has no trouble from the condition when the organ is erect. I do not think that there would be any feasible treatment.

A Case of Partial Recovery from (?) Pseudo-Hypertrophic Paralysis.

Dr. Vaughan Pendred: This girl has been ill about four years. Her first symptom, at the age of 15, was that she walked on her toes, for which Mr. Keetley divided the Achillis tendons, which resulted in improvement of gait for a while. Gradually she lost muscular power until she was unable to feed herself, or to turn over in bed. On admission into the Fulham Infirmary she was powerless and very ill, and was blind from syphilitic kerato-iritis. Under iodide of potassium she is slowly recovering. Her sight is nearly restored, and her muscular power is returning. You will notice that there is no wasting of the muscles apparent to the eye—in fact those of the calf appear abnormally well developed. I venture to think that this is a case where the patient is recovering from symptoms closely resembling those of pseudo-hypertrophic paralysis, the cause being some obscure syphilitic affection of the muscles.

A Case of Commencing Acromegaly.

Dr. Vaughan Pendred: I have watched this girl, aged 22, for six months, and have noticed that her lower jaw has increased in size, and that her hands have grown larger. Her skin is dry; also she is hypermetropic—a symptom which is increasing. The case is certainly suggestive of the earliest stages of acromegaly. The fundus of the eye is normal.

The Mirror of Practice.

TWO CASES OF DOUBLE OPTIC NEURITIS, WITH DISEASE OF THE MASTOID CELLS, WITHOUT EVIDENCE OF INTRA-CRANIAL DISEASE. RECOVERY.

By John R. Lunn, F.R.C.S.Edin.
Medical Superintendent St. Marylebone Infirmary.

Case I.— William G., aged 11, was admitted into St. Marylebone Infirmary, August 24, 1897, for cerebral irritation, with the following history. About a year ago he had an attack of influenza, which was followed by deafness, but there was no discharge from the ears. He had also tonsillitis. Severe aching pain commenced in the right ear about nine months before admission, for which he was treated at home by his own medical attendant, and he got quite well.

Two weeks before admission he began to be very ill, and suffered much from a right frontal headache, especially at nights. On several occasions he became very restless, delirious, and screaming out with pain in the right temple; he frequently vomited, and had a dull aching pain behind his eyes. His friends did not notice any squinting or discharge from his ears.

State on Admission.—The boy looked very ill and much emaciated, and complained of giddiness and severe pain in the right ear, from which there was a little offensive discharge, and he appeared quite deaf with the right ear; the left appeared normal. The boy laid in his bed curled up, resenting all interference. His temperature was 99·6°, and his pulse was slow and very small; 54. Nothing was made out in his neck. Behind the right ear was a fluctuating swelling, and percussion in that area produced intense pain. The pupils were dilated, but acted to light and accommodation; no nystagmus or paresis of the ocular muscles. Optic neuritis was well marked in both of his eyes. It was impossible to make out what the boy could read, as he seemed so ill, and could not bear the light of a candle. He was kept in a dark room. He had no physical signs in his chest, and the urine was normal. On August 26 the patient became very delirious, and could scarcely be kept in bed, and the swelling behind the right ear was becoming larger and more shiny; there was a little offensive smell from the auditory canal, and on examination with the auroscope a small perforation was noticed in the right membrana

tympani, from which oozed a little pus, and was increased by pressure. The boy was put under the influence of chloroform. The head was shaved and the usual antiseptic precautions taken. A U-shaped incision was made over the mastoid process with the convexity looking downwards. The flap was turned up, and on reflecting the skin flap and exposing the bone a small round hole was seen in the mastoid process, through which oozed offensive pus showing synchonous pulsation into the blood in the lateral sinus. The opening in the bone communicated with the mastoid cells.

The gouge was then used to remove the bone, and the mastoid cells were found full of stinking caseous matter. This was carefully scraped away with various size spoons, and the wound was well irrigated, but it was found necessary to pursue the operation further and further until the spoon seemed to be deep down in the petrous bone. At the posterior end of the excavation one could feel and see the pulsating lateral sinus, which was not thrombosed, and at its upper limit the dura mater was exposed. A fine sterilised platinum exploring needle was passed into the brain substance with a view of finding pus, but none was discovered. The operation was then terminated, the skin flaps sutured and an india-rubber drainage tube left in the wound.

August 27.—The wound was dressed, but only a little pus, which was not offensive, escaped. His temperature was normal, and the boy's mind was quite clear, and he answered questions quite rationally, and stated he felt much better, and free from pain. He was ravenous for food. On August 29 his temperature rose to 101·8° F., which apparently was due to some superficial suppuration of the skin stitches. It was also noted the optic neuritis had commenced to clear up in both eyes, and the outline of both discs could be well seen. The patient went on very well until September 4, when his temperature went up to 103·2°, though there was nothing to account for the rise. He soon became convalescent, and was up all day.

October 30.—The fundus was normal, and he was discharged cured, November, 1897.

CASE II.—Susan M., aged 14, was admitted August 31, 1897, with otorrhœa of the right ear. She stated she had measles and scarlet fever seven years ago, and ever since she had been deaf with both of her ears.

State on Admission. — The girl was well nourished, but complained of severe vertigo and giddiness. Behind the right ear was a fluctuating swelling, and there was an offensive purulent discharge from the right external auditory meatus; there was none from the left. She was very

deaf, and could only hear a watch about 6 inches from her left ear. On examining the ear with the auroscope the right tympanic membrane was perforated and surrounded by unhealthy granulations; through the perforated membrane was discharging pus. The left membrana tympani was very opaque, but not perforated. Her throat was congested, but her tonsils were not enlarged. She was very drowsy at times and irritable, and appeared to suffer a great deal of pain in her right ear. The temperature was slightly raised at night time and her pulse was small. Both optic discs showed signs of optic neuritis, especially the right. Her sight appeared quite normal, and she did not complain of it, and she read small print. As the swelling over the mastoid process appeared to be getting larger it was decided to trephine the right mastoid antrum.

Much stenosed bone had to be gouged away before the offensive caseous matter could be removed. A drain was then passed through the bone into the external auditory meatus. The patient soon began to improve, and it was noted on the third day after the operation that the optic neuritis was rapidly disappearing. She made an interrupted recovery with the exception of some few granulations which appeared in the external auditory canal, after the removal of the drainage tube, which were cauterised, and she was discharged in February, 1898.

Remarks.—Having seen many cases of inflammatory condition of the temporal bone due to catarrh and suppuration of the middle ear, I have seldom observed optic neuritis associated with this disease until lately, though this complication is, I believe, a recognised one, and two cases have been put on record by Mr. Barker in the *Clinical Transactions* (vol. xxiii.), and the subject is mentioned by Sir William Gowers in his book, and also in the Hunterian Lecture of 1889.

It was difficult to prove that the boy (Case I.) had not some cerebral or meningeal disease at the time of operation. From what I have seen of him since, there was nothing to lead one to think he had any cerebral or meningeal disease, except the condition of his eyes and delirium. I kept him in the Infirmary for some time after the operation, remembering cerebral abscesses and tumours remain latent for a lengthened period without showing any symptoms.

I think, with Mr. Barker, that optic neuritis would be often found in many of these cases of mastoid disease in which there is no evidence of any proper intracranial disease, and if it should be proved by *post-mortem* evidence that the presence of purulent inflammation in the sulcus lateralis which may

have existed in my case (No. 1), is able to produce optic neuritis in the absence of meningitis or cerebritis, we shall have secured a valuable diagnostic symptom for a class of affections upon which it is often difficult to come to a conclusion, and will encourage us to resort to early surgical interference with more confidence of success than has hitherto been felt in dealing with this class of disease; and this is my excuse for bringing these two short successful cases before the Society, as I thought they might be useful to others who are interested in the surgery of the mastoid cells.

A CASE OF (?) SYPHILOMA OF THE BRAIN; OPTIC NEURITIS WITH MUCH LOSS OF VISION—RECOVERY.

By Percy Dunn, F.R.C.S.

Ophthalmic Surgeon to the West London Hospital.

The following case is an interesting one, and not least in view of the good result in which, so far, it has terminated. H. E. P., a doll-maker by trade, came to my out-patient room on November 17, 1898, complaining of loss of vision. For about the last six weeks he had been suffering from sudden attacks of nausea and vomiting. The attacks would come on without any warning, at any time in the day; and quite independently of anything that he might be doing at the time or had previously eaten. Moreover for the past three weeks he had begun to suffer from intense frontal headaches, the intensity of which was often such that he was obliged to go to bed. Then the vision had begun to fail, and it was now so bad that he could not see to follow his occupation. He was a well nourished man, of fair physique, but pallid looking. R. V. $= \frac{6}{\text{nil}}$ not improved; L. V. $= \frac{6}{\text{nil}}$ not improved; J. 20, barely, with each eye at five inches. On ophthalmoscopic examination both discs were markedly hyperæmic, the margins were slightly blurred, and the veins in each fundus enlarged and tortuous; the arteries were smaller than normal.

Inquiries as to a specific history were negative. He admitted, however, that he had been a great smoker, and that he was formerly accustomed to smoke between a quarter and a half of an ounce of shag daily at his work. On testing his colour vision this was impaired for red, that is to say, he was just able to make out the colour, so that there was no definite central scotoma. The iodide potassium mixture was ordered, containing ten grains of the iodide, to be taken thrice daily.

November 24.—Since his last visit he thinks his headaches have been worse, but two days after beginning the medicine the nausea and sickness ceased. R. V. and L. V. $= \frac{6}{\text{nil}}$; nevertheless he states that he sees a little clearer. J. 15.

December 1.—Headaches much better. The iodide was increased to 15 grs. thrice daily. No nausea or vomiting. R. V. and L. V. $= \frac{6}{\text{nil}}$, but some improvement. J. 15.

December 15.—Still some improvement. R. V. and L. V. $= \frac{6}{60}$. J. 14 (some words). The discs are less hyperæmic and the blurring of the margins almost gone. The vessels are about the same.

December 22.—R. V. and L. V. $= \frac{6}{36}$. J. 10.

January 5, 1899.—Some words of J. 4.

January 19.—R. V. and L. V. $= \frac{6}{36}$; one or two words of J. 2.

February 16.—R. V. $= \frac{6}{18}$; L. V. $= \frac{6}{18}$. Some words of J. 1.

March 3.—Reads J. 1 slowly. Distant vision the same as in the last note.

March 16.—Reads J. 1 fairly quickly; can almost make out $\frac{6}{12}$ with each eye.

Remarks.—Despite the fact that the patient denied at first having had syphilis, the symptoms—vomiting, intense headaches, and commencing optic neuritis—pointed to the development of some gross cerebral lesion, which was probably of a syphilitic character. While in the course of demonstrating the case before the Post Graduate class I referred to these facts in his presence. He evidently took them to heart, for on his next visit he expressed his contrition at having stated that which was not true. He then admitted having had syphilis ten years previously. This confession was in a measure timely, inasmuch as it suggested the expediency of increasing the dose of the iodide. The good effect of the drug was markedly shown by the cessation of the nausea and vomiting, which took place two days after its administration had begun. Again, the steady improvement of the patient from the first under its influence practically placed the diagnosis almost beyond doubt. Time only can show whether the possible contingency of optic atrophy will ensue as the result of the slight attack of neuritis, but so far the chances are in favour of no secondary changes occurring.

Reviews and Notices of Books.

HUTCHISON AND RAINEY ON CLINICAL METHODS.[1]

THE rapid advance in recent years on the scientific side of medicine makes it difficult for both student and practitioner alike to keep themselves abreast of the discoveries and what is more important, their clinical application. Too much value is attached in hospital work by students to "going round" with an eminent teacher, and too little time is devoted to personal clinical observation; the one does not necessarily preclude the other. Better half-a-dozen cases carefully and thoroughly studied at the bedside after methodical teaching, than simply being one of a crowd at "going round" a score of times. To assist in reminding the student of what he has been taught and present clinical methods in a form available for practical use at the bedside are the objects of the book before us.

The book is so bristling with valuable facts in a small space that it is not surprising to note a few omissions. For instance, under palpation no mention is made of a plan advocated by Dr. Maguire where the gentlest possible pressure by the finger tips indicates the different densities of the subjacent structures by their varying degrees of resistance. Again, a word of caution is needed to restrain the vigour with which some men percuss the chest regardless of the pain the blows give. This arises from ignorance of the fact that a hyperæsthesia of the chest wall does at times really exist.

The chapters on the circulatory and the nervous systems and on the urine are particularly full and lucid. The illustrations, some of which are coloured, will be found very useful. The index is full and is arranged to facilitate ready reference. We warmly recommend the book.

HUDSON-COX AND STOKES' POCKET PHARMACOPŒIA.[2]

THE publication of the "British Pharmacopœia" for 1898 has led to the issue of a considerable number of new works and fresh editions of books dealing with materia medica.

The small volume before us is a very handy work intended for the pocket, and contains an epitome of the official Phar-

[1] "Clinical Methods," by Robert Hutchison, M.D., M.R.C.P., and Harry Rainey, M.A., F.R.C.P.Ed., F.R.S.E. London: Cassell & Company, 1898.

[2] "The Pocket Pharmacopœia," by F. Hudson-Cox, F.G.C., F.C.S., and John Stokes, M.D., B.S. London: Bailliere, Tindall and Cox, 1899.

macopœia, together with the therapeutical actions of the drugs. The book is compact and accurate, and should prove of assistance not only to the practitioner but also to the student.

ST. BARTHOLOMEW'S HOSPITAL REPORTS.[1]

ONE of the salient features of the Reports issued from a hospital should be a systematic account of the actual work undertaken in the wards, laboratories, &c., during the preceding twelve months. In the newly-issued volume before us we have this very well carried out. On turning to the concluding pages, some 260 in number, we find the statistical tables for the year 1897 compiled by the Medical Registrars, Drs. James Calvert and A. E. Garrod, and by the Surgical Registrar, Mr. James Berry—the last time, we are sorry to say, that such will come from his pen. Personally we are acquainted with the amount of labour both these tables involve, and we would congratulate the three authors on the thorough manner in which they have again carried out their arduous task. Here will be found the absolute record of work done by the staff of the Hospital, analysed and arranged in such a way that a vast amount of desirable information is at the reader's disposal with the minimum cost of trouble. We venture to think that these tables are one of the, if not the most, valuable features of the Reports.

Reverting to the earlier pages, there are some interesting and instructive papers by several members of the staff. We would draw attention to Mr. H. T. Butlin's account of the results of his 129 cases of operation for cancer of the breast. He records his best thanks to Mr. Preston Maxwell for the extreme trouble that he has taken in following up the after-history of the cases, and when it is said that no less than 126 out of the 129 cases have been traced up to and beyond three years after the operation, the amount of labour involved can be somewhat appreciated.

Mr. Butlin alludes to his statements in the earlier years of his work on "Operative Procedures for Malignant Disease," and compares them with the measures that he now adopts. Space will not allow us to refer to any further details of this valuable paper, but we may remark that the author is very hopeful of the results from the "thorough" operation based on the lines suggested by Halsted.

Mr. Alban Doran's monograph on "Cysts of the Urachus"

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[1] "St. Bartholomew's Hospital Reports," vol. xxxiv., 1898. Edited by Norman Moore, M.D., and D'Arcy Power, F.R.C.S. London: Smith, Elder, & Co., 1899.

well deserves perusal, as also does Dr. R. A. Yeld's on "Alcoholic Cirrhosis of the Liver."

The Luke-Armstrong Prize Essay by Dr. Percy E. Turner on "Pneumonia and the Pneumococcus," with especial reference to the action of oxygen, is a masterly paper, and should become a classic on the subject.

Space will not permit us to more than name a few of the other papers—A case of an abdominal cyst, from which after tapping all food taken by the mouth, and all bile secreted escaped, cured by pressure, by Sir Thomas Smith, Bart.; the cases of appendicitis for two years in the Hospital under Mr. Butlin, by Mr. A. R. J. Douglas; Points of interest in connection with various forms of abscess, by Howard Marsh.

GANT'S GUIDE TO THE EXAMINATIONS OF THE CONJOINT BOARD.[1]

THE popularity of Gant's Guide is still as pronounced as in its early days; in proof thereof the publishers have just issued a seventh edition.

Mr. Willmott Evans has discharged the duty of revising and editing the new issue, and thus the work has been brought up to date. Included in the volume is a full list of the examination papers set between the years 1890-1898, both for the Conjoint Examinations and for the Fellowship, and these will be found exceedingly useful to students as tests with which to gauge their chances of passing the examinations.

DAVIDSON'S IMPROVED COMPLETE SIGHT TEST.

THE improved complete sight test which Mr. Davidson has brought out, in addition to the usual type, contains the "dots" used for testing the vision of recruits in line regiments. Each of the dots seen by a person at a distance of 10 ft. corresponds with a bull's eye at 600 yds. In the centre of the appliance are two revolving discs, one with sets of lines at right angles to each other for testing astigmatism, and the second with various tinted colours for testing the colour vision. Moreover, the reverse side of the appliance is marked off with horizontal and vertical lines graduated for testing at a distance of 10 ft. for convergence and ocular deviations generally. Altogether the improved complete sight test is both ingenious and accurate, and we can highly recommend it as the best in the market.

[1] "A Guide to the Examinations by the Conjoint Examining Board in England, and for the Diploma of Fellow of the Royal College of Surgeons of England," by Frederick James Gant, F.R.C.S. Seventh Edition. Revised throughout by Willmott Evans, M.D., B.S., B.Sc.Lond., F.R.C.S. London: Bailliere, Tindall & Cox, 1899.

THE LIBRARY REPORT.

THE library of the Society being now well housed in the ante-room to our place of meeting, and always accessible to members, the time has arrived for improving it, and for preparing a catalogue. To this end the Council have directed that a special subscription list shall be opened, to which it is hoped that every member will give. Contributions of 2s. 6d. will be gladly received, and larger ones will not be refused. It is several years since such a subscription list was opened, and it will be some years before it is repeated again. To start this subscription the following sums have been promised:—The General Fund of the Society £10; The West London Post-Graduate College, £10; the Hon. Librarian, £10.

With the money obtained the Library Committee hope to—

(1) Complete a series of books of reference in the various departments of medicine, adapted to the needs of gentlemen in practice.

(2) Bind a large number of volumes of periodicals and journals.

(3) Prepare a catalogue.

(4) Defray various small current expenses.

Members wishing to refer to or take out books can do so on communicating with Martin, the porter in charge.

Donations of either money or books may be sent to either the Hon. Librarian, the Hon. Treasurer, or to either of the Hon. Secretaries. Money sent to the Hon. Librarian should be directed to 56, Grosvenor Street. Books should be sent to the West London Hospital. All gifts will be acknowledged both by post and in the JOURNAL.

LIST OF MEMBERS ELECTED DURING THE PAST QUARTER.

(1) CECIL BANTING, M.B., B.S. (Lond.), 22, Campden Hill Road, Kensington, W.

(2) ALFRED J. GRANT, M.D. (Brux.), 13, Irving Mansions, Queen's Club Gardens, West Kensington, W.

(3) H. B. JONES, M.B. (Edin.), 276, Uxbridge Road, W.

(4) A. BARCLAY LYON, M.B., C.M. (Aberd.), 165, The Grove, Hammersmith, W.

(5) H. J. PATERSON, M.B., B.C. (Cantab.), F.R.C.S., 19, Lower Seymour Street, W.

(6) S. T. PRUEN, M.D. (Durh.), Sherborne Lodge, Cheltenham.

(7) R. M. RALPH, M.D. (R.U.I.), M.Ch., 8, Battersea Rise, S.W.

(8) LINDLEY M. SCOTT, M.D., C.M. (Aberd.), 98, Sloane Street, S.W.
(9) RICHARD BEVAN, L.R.C.P., D.P.H., 31, Girdler's Road, West Kensington, W.
(10) ARTHUR G. HAYDON, M.D. (Brux.), M.R.C.S., 74, Cotleigh Road, West Hampstead, N.W.
(11) DAVID B. KEOWN, M.R.C.S., L.R.C.P., 187, Ebury Street, S.W.
(12) W. TRETHOWAN ROWE, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital, E.C.
(13) HARRY SINIGAR, M.D., B.S. (Lond.), M.R.C.S., Marylebone Infirmary, Notting Hill, W.
(14) GIOVANNI ANSALDI, M.D.Genoa, and L.R.C.P. and S.Edin., 1, Via Gioberti, San Remo, Italy.
(15) CHARLES N. BARTON, L.R.C.P., M.R.C.S., 17, Redcliffe Gardens. S.W.
(16) W. SOLTAU ECCLES, M.R.C.S., L.S.A., 140, Church Road, Upper Norwood.
(17) EDMUND P. ISAACS, L.R.C.P., M.R.C.S., 1, Sinclair Road, Kensington, W.
(18) HARRY B. LAVIES, M.B., B.S.Durh., 61, St. George's Road, S.W.
(19) A. DE PRENDERVILLE, M.R.C.S., L.R.C.P., 49, Weymouth Street, W.

Miscellaneous Extracts.

THE GYNÆCOLOGICAL ASPECT OF BICYCLING.—Dr. J. W. Ballantyne, in a recent number of the *International Medical Journal*, has made a complete digest of the consensus of opinion on this subject. He divides the indications for bicycling into two groups; those in which it is recommended, and those in which it may be permitted. It is to be recommended in:—(1) uterine congestions; (2) amenorrhœa, in relation with arrested development of uterus or ovaries, with anæmia, chloro-anæmia, digestive disturbances, neurasthenia, chronic diseases, physical or moral shocks, chills, falls, &c.; (3) dysmenorrhœa of the nervous type; (4) dysmenorrhœa with congestion of the uterus and ovaries; (5) vicarious menstruation; (6) fibroid tumours, after the termination of the hæmorrhagic period. It is to be permitted in:—(1) mechanical dysmenorrhœa, congenital or acquired, and in membranous dysmenorrhœa; (2) uterine displacements (prolapse, flexions and version); (3) chronic metritis, with *post-partum* or *post-abortum* subinvolution, which is no longer painful and which is in process of cure, but with moderation; (4) leucorrhœa in anæmic, chloro-anæmic, and delicate women.

TO PALPATE AN APPENDIX.—An easy way is to stand on the patient's right, using three right-hand fingers to feel with, and three left-hand fingers placed upon these to press with. The fingers that are to do the feeling are pressed by means of

the three others down under the border of the right rectus abdominis muscle at the level of the navel, and slowly drawn towards the examiner. The author's sole landmark, the ascending colon, is then felt to slip out from under the fingers, and by repeating the process toward the cæcum we soon come to its end, and there begin to hunt for the appendix by rolling the cæcum from one side to the other of the finger-tips. The proximal end of the appendix is found near the distal extremity of the cæcum, and we then follow the rest of the appendix in any direction. The proportion of appendices that cannot be palpated will become smaller and smaller as the finger-tips become educated. The point about using no muscular effort in the hand that is to be used in feeling is as important in palpating appendices as it is in palpating ovaries and tubes. The very delicate sense of touch is preserved if the left hand is used for pushing upon the examining hand.—*New York Med. Record.*

Syphilis or Gonorrhœa.—While local suppurative syphilitic disease is recognised in the male, the same affection in women does not seem to be appreciated. Anything which is not obviously syphilitic in women is usually attributed to gonorrhœa. I have no hesitation in bearing testimony to the efficacy of mercurial treatment in cases of urethritis in the male and leucorrhœa in the female, which have resisted the usual gonorrhœal remedies.—Dr. John A. Shaw-Mackenzie, "On Maternal Syphilis."

Appendicitis and Pregnancy.—E. Fraenkel concluded an address on this subject, recently, with the remark that pregnancy has no specific influence upon the course of appendicitis, and appendicitis does not necessarily affect the pregnancy unfavourably, although abortions and premature deliveries are more frequent. The interruption of the pregnancy is not the cause of death, but the severe local infection, which is the cause of the abortion. Extensive adhesions with the genital organs only rarely induce abortion. There is a possibility of disturbance during the post-partum period from adhesions. Perforation of the abscess may occur during contractions of the uterus. Exacerbations of the appendicitis may lead to puerperal infection, and there is also a possibility of parametritis. The prognosis is "not favourable" for the mother; "unfavourable" for the child. The diagnosis is best confirmed in narcosis, patient on the left side. With a first slight or moderate attack, expectant treatment is indicated, but recurrence always calls for an operation, which

does not differ from the usual intervention.—*Deutsche Med. Woch.*, Dec. 22, 1898. *Journal of the American Medical Association.*

CONGENITAL LUXATION OF THE HIP.—Kümmel has been investigating the ultimate results of forty-five cases in which he reduced the luxation by the Pravaz Lorenz method during the last two-and-a-half years. He has been surprised and gratified to find the functional results much better than he had anticipated. Radiographs taken before and after treatment showed the entire absence of an acetabulum in many cases, and yet a firm support has developed in the pelvis, holding the head in such a position that the gait and movements of the limb are most satisfactory. The aim is to fix the head, which puts an end to the abnormal movements. Whether the head is in the spot where it anatomically belongs is not so very important. The essential point is to hold it firm. In most cases the screw is unnecessary; the limb is merely stretched and the transposition of the head affected. He advises against treating both limbs at once. The operation failed in only a few isolated cases, in which the head could not be held firm. In nearly every case with or without an acetabulum, there is no fatigue, the head is "fixed," and the lordosis compensated.—*Munich Med. Woch.*, Dec. 20, 1898. *Journal of the American Medical Association.*

LIST OF GUESTS AND MEMBERS PRESENT AT THE DINNER, FEBRUARY 8, 1899.

A. W. Addinsell, T. Gunton Alderton, James Allan, Charles Andrews, Oswald Baker, Ashley W. Barrett, W. H. Baker, James B. Ball, W. P. Barrett, W. H. Battle, A. P. Beddard, Edward Bellasis, L. A. Bidwell, J. Leonard Bolden, Charles Bordier, W. H. Bourke, E. T. A. Boyton, G. F. Briggs, Lennox Browne, T. Bryant, E. H. Burkett, C. W. Chapman, Captain Chawner, A. H. W. Clemow, S. D. Clippingdale, J. E. Coulson, J. Crombie, L. Cutter, Alban Doran, C. Luxmore Drew, H. Percy Dunn, W. McAdam Eccles, Alfred Eddowes, F. Swinford Edwards, E. V. F. Ferrier, Luke Fildes, Colcott Fox, P. J. Freyer, W. T. Gardner, R. J. Gilbert, S. Clewin Griffith, M. Handfield-Jones, Francis Harper, A. G. Haydon, A. E. Hodgkins, S. F. Holloway, F. W. Humphreys, The Rev. S. Ive, W. Beech Johnston, H. C. Juler, H. E. Juler, C. B. Keetley, H. Knight, W. H. Lamb, J. Langton, Albert Lawless, S. H. Leonard, R. Murray Leslie, A. G. Levy, John Liddell, R. W. Lloyd, F. H. Low, Norman McColl, Hector Mackenzie, F. R. Mallard, Colonel Mander, Howard Marsh, J. A. Mason, J. A. Masters, F. J. McCann, A. McLean, J. Herbert Menzies, J. A. Mansell Moullin, E. J. Nix, Edmund Owen, Stephen Paget, G. E. Paget, J. S. Part, W. B. Paterson, J. F. Payne, F. G. Philps, Rowland Pollock, H. Percy Potter, Claude Ravenhill, G. D. Robinson, Amand Routh, Charles Ryall, Frank Savery, A. L. Scott, Charles J. Sells, J. A. Shaw-Mackenzie, A. M. Ross Sinclair, G. P. Shuter, M. H. Taylor, Seymour Taylor, W. E. Thompson-Sharpe, J. W. L. Thudichum, W. Aldren Turner, B. W. Walker, Horace Walker, Hunter U. Walker, F. Wallen, H. Webb.

NOTES ON NEW PREPARATIONS, &c.

Antitoxins.—Standardized Drug Extracts.—Parke, Davis & Co. It is an interesting fact that the use of antitoxins, or the "Serum Treatment," has actually to be dated only from the year 1895. Up till then impure, and wholly uncertain as to strength, were the serums upon the market. A change has now come over the scene. The medical practitioner can now obtain the required antitoxin pure, standardized, and absolutely reliable in its action. Such a step forward is to be hailed with delight, for the success of the serum treatment cannot be gainsaid. We believe the serum for the treatment of diphtheria prepared by Messrs. Parke, Davis & Co. to be of perfect manufacture and to be altogether trustworthy. It is issued in sealed bulbs, in which the antitoxin will remain unchanged for a period of many months.

The same firm has sent us samples of their **Ergot Aseptic** Pure, conveniently sent out in hermetically closed bulbs; it is always ready for use in cases where its oxytocic or hæmostatic effect is desirable. This preparation is standardized by the firm through physiological experiments on pregnant animals, so far as its action on the uterus is concerned, while its hæmostatic power is determined by its effect upon the red combs of cocks. There are two methods whereby drug extracts can be satisfactorily made uniform as to their strength, and these are chemical and physiological. Both of these are now being used extensively by Messrs. Parke, Davis & Co., in the standardizing of such medicinal preparations.

Elixirs.—Samples of several important elixirs have also been placed in our hands by the same firm. Elixir Bromide Compound, Elixir Lactated Pepsin, Elixir Pichi Compound, may be mentioned as among those which we can recommend. One fact stands out prominently with regard to all of them, and that is that the exact amount of each of the ingredients is clearly specified on the label upon each preparation.

Ethereal Antiseptic Soap.—Messrs. Parke, Davis & Co., are preparing an ethereal solution of soap of an antiseptic nature, which appears, from a trial that we have given it, to possess the very distinct advantage of being able to penetrate considerably better into the creases of the skin of the hands, and under the nails, than does the ordinary hard curd soap, even when a good lather is obtained.

Chloroform and Ether.—Salamon & Co., Ltd. We have used specimens of the anæsthetic preparations of this firm, and are pleased to be able to report very favourably upon them. They are pure, trustworthy, and moderate in price. We consider the ether sent out by Messrs. Salamon & Co. is of high

excellence. It produces anæsthesia rapidly, without distressing symptoms, and with less after-vomiting than we have noticed with some other ethers.

"Soloid" Carbolic Acid. "Tabloid" Krameria and Cocaine. —Messrs. Burroughs, Wellcome & Co. Samples of these two excellent new preparations of this firm have reached us.

The "Soloid" is one that cannot fail to find a useful place in the armamentarium of the surgeon and accoucheur.

One soloid of the 60 grs. of carbolic acid dissolved in three-quarters of a pint of water will make approximately a 1 per cent. solution. A harmless colouring reagent is added to the soloid so that it can be readily distinguished from the colourless tabloids used for internal administration, and moreover the soloid has a distinctive shape imparted to it, for a

like purpose. The "Tabloid" we have also made a personal trial with, and can report that, for the condition of throat that has been peculiarly prevalent at the present season, it has met all our expectations. Rhatany with cocaine is certainly a combination which deserves a wider use, giving as it does the astringent property of the one with the sedative action of the other. In pleasantness and palatability the tabloid is in no way inferior to lozenges and similar preparations which are not often so effective or so rapid in their action.

Mineral Waters.—The Chemists Aërated Mineral Waters Association, Limited. This firm are sending out mineral waters, pure and moderate in price, which deserve all the praise that has in the past been awarded to them. It is absolutely essential for the well-being of the community that such beverages should be prepared with the utmost care, so as to render certain their freedom from bacteria and their products. We highly recommend the mineral waters of this Association as attaining to this standard of purity.

Antiseptic Dressings. Aseptic Ligatures. Isinglass Plasters.—Seabury & Johnson. We have made a somewhat extensive trial of the preparations of this firm, and have no hesitation in announcing that all their goods are of the highest quality, and can be uniformly depended upon. For neatness of the manner in which they are sent out, for the convenient forms in which they are manufactured, and for their stability, we know of no dressings that excel them.

The aseptic ligatures, especially those of silk, which this

firm prepare and issue in sealed capsules, are of the very greatest help to those who are called upon now and again, and that in an emergency, to deal with wounds. We would advise all who may not have had an opportunity of seeing these for themselves, to obtain samples of them, and put them to the test of actual use. Perhaps for small operations no simple dressing is so good as the application of Messrs. Seabury & Johnson's antiseptic isinglass plaster, which adheres readily, leaves nothing of annoyance on the skin when removed, and occupies the smallest of space.

Panopepton.—Fairchild, Bros. & Foster. We have tested the digestive and food preparation of this firm, known by the name of panopepton. When the market appears to be flooded with such therapeutic agents, it is pleasing to know of one that combines at least three excellent qualities, for panopepton is a mixed food—being a bread and beef peptone—has been digested and so is suited to the most delicate digestions, and is not liable to decomposition. Under some circumstances we might have wished that the preservative were other than sherry, since it is by no means always desirable that alcohol should be prescribed. Still here we have a nutritive fluid, consisting of the substance of two great foods, converted into a soluble, completely and freely assimilable form by means of the natural principles of digestion.

NOTES AND NEWS.

THE Annual Dinner of the Society duly took place on Wednesday, February 8, at the Trocadero Restaurant. In the last number of the JOURNAL I expressed the hope that the attendance would reach 150 members, *exclusive* of guests. This would, of course, have been a record. But, despite the efflorescence of my estimate, it is nevertheless the fact that the dinner still proved to be a record one, inasmuch as the total attendance, inclusive of guests, reached 108. However, it was regretfully noticed that many familiar faces were absent, and the more so now that the Annual Dinner is becoming such an integral part of the Society's existence. Patients, however, often exercise the inconvenient faculty of "disposing," while their doctors "propose," and doubtless this was largely the cause of the absenteeism which to some extent was prevalent at the dinner.

BUT the dinner established another record, of which mention should be made. Five minutes after the President had

taken the chair there was not a single seat vacant. Such a solid phalanx of diners as this must have created a most favourable impression upon the Society's guests. Everyone knows how melancholy and depressing "large colobomata," that is to say, half empty tables, appear at public dinners, and everyone knows how frequent it is that such "colobomata" occur. That there should, however, have been no defect of the kind at our Annual Dinner only shows how perfect must have been the organisation of the *réunion*, and for this we are greatly indebted to the senior Secretary of the Society, Mr. McAdam Eccles, who was mainly responsible for the dinner arrangements.

THE President, Dr. S. D. Clippingdale, made an excellent chairman, and he conferred a great favour upon the Society by including among his guests the illustrious artist, the painter of "The Doctor," Mr. Luke Fildes, R.A. When Mr. Fildes rose to reply to the toast of "The Guests" a most cordial reception was accorded him, and the grateful and sympathetic allusions which he made to our profession vividly recalled his delineation of the best characteristics of a medical man which appears in his celebrated picture.

CONCERNING "The Doctor," Mr. Fildes related an interesting story, the substance of which I may repeat here for the benefit of the members who were not present at the dinner.

A WELL-KNOWN English actor and his son were travelling in the United States, and soon after arriving in New York on their way home the latter was seized with some sudden illness. The father was at once strongly advised to take his son to consult a well-known physician, but the drawback was that the latter had retired from practice, and could not be prevailed upon to see professionally any but his most intimate friends. However, the actor decided to risk a refusal, and called with his son at the physician's residence. The consultant received his visitors in the waiting-room; but he was inexorable, reiterating his impossibility to concede the favour required. Just, however, as the interview had terminated, the actor happened to glance at a fine engraving of "The Doctor" hanging upon the wall of the room. "Ah," he said, "I see that you have a copy of 'The Doctor'—the artist is a great friend of mine." "What," replied the consultant, "is the painter a friend of yours? Then bring your son into my consulting-room and I shall only be too pleased to do all that I can for him"—a fine example, this, of Shakespeare's saying:

"One touch of Nature makes the whole world kin."

THE following was the Toast List at the Dinner:—"The Queen," by the President; "The West London Medico-Chirurgical Society," by the President, responded to by Mr. C. B. Keetley; "Kindred Societies," by Dr. Seymour Taylor, responded to by the President of the Royal Medical and Chirurgical Society (Mr. Bryant); "The Guests," by Mr. Howard Marsh, and acknowledged by Mr. Thompson Sharpe, M.P., and Mr. Luke Fildes, R.A.; "The President," by Dr. A. H. W. Clemow, and replied to by the President; lastly, "The Officers of the Society and the Editor of the JOURNAL," by Mr. Stephen Paget, and responded to by the Treasurer, Mr. Alderton, the Honorary Secretaries, Mr. McAdam Eccles and Dr. G. D. Robinson, and myself. A selection of music was played during the evening by the London Concert Orchestra, and Dr. Arthur Haydon gained much applause for two violin solos, as well as Mr. Claude Ravenhill for a song.

IN the course of the evening a telegram of greeting from the Society was despatched to the Cavendish Lecturer, Professor Osler, at Baltimore, but no reply was received up to the time of the termination of the proceedings. In a letter subsequently received by the senior Secretary, Professor Osler explained that owing to being from home he did not receive the telegram in time to send a reply, otherwise he would have cordially acknowledged the friendly greeting.

ANOTHER well-known Member of the Committee of Management of the West London Hospital passed away last month. Mr. Edward Bird, whose age at the time of his death was 82, had been actively connected with the hospital for upwards of thirty years. He was uncle to the present Chairman, and with the exception of his relative, so far as service was concerned, was the oldest Member of the Committee of Management. The policy which he advocated was rather that of moving cautiously in regard to the development of the charity; he was not, therefore, too favourably disposed to the opening of the new wing, the reason mainly being that he saw difficulties ahead concerning the raising of funds for its maintenance. If, however, he was somewhat at variance in matters of policy with his colleagues, it is nevertheless only true to say that in the late Mr. Edward Bird the hospital always had a zealous, hard-working supporter, who during his long term of office unfailingly did his utmost to advance its interests.

THE other day a surgeon, whose handicap is an enviably low one, was attempting a "bogey" operation—I must not mention what. The score promised to terminate brilliantly. But towards the end he found himself badly "bunkered," so he gave it up, and in another way the patient had to do the same. "Death from chloroform" was the verdict of the coroner's jury returned concerning the patient a few days afterwards.

DR. DARLEY HARTLEY, of Cape Town, a member of the Society, who, it will be remembered, made an interesting speech at the West London Hospital Dinner last year, and referred most approvingly to the work of the Hospital, has been good enough to call attention in South Africa to the post-graduate teaching at the West London. He suggests the establishment of a post-graduate school in Cape Town, and in discussing the question in a letter to the *South African Medical Journal* for December last, Dr. Hartley asserts that there need be no difficulty about the enterprise if the profession in the Colony were willing to rise above mere commercialism to a scientific platform. He then proceeds: "Models in working order are plentiful enough. As far as hospital work is concerned, no better model need be sought for than the West London Hospital, which in many respects (although about half the size of the Somerset Hospital) is placed under similar circumstances to our own, and which has built up, by slow degrees, a splendid system of post-graduate tuition, appreciated to the full not only by a wide circle of practitioners in its neighbourhood, but by a goodly number of others, who, like myself, owe very much to it." Higher praise than this could scarcely have been bestowed.

MY colleague, the Editorial Secretary, is gradually accumulating a large sum of indebtedness due to him from the Society for the very successful manner with which he is conducting his department. It is quite impossible to accord him sufficient praise for all that he has done in this regard. The work is now becoming very onerous, and demands the expenditure of much valuable time. Still, as I know from personal experience, it is marvellous the amount of trouble which he takes in bringing the JOURNAL under the notice of advertisers, and his solid, practical, business capacity has enabled him to succeed with them, where many others would have failed. The only hope, therefore, that the Society can have in the matter, is that he will long continue to evince that warm interest in the JOURNAL which he has done since undertaking the duties of his office, for assuredly without such

valuable services as his the Society would not have a Journal comparable to that which it now possesses.

I BEGAN to ruminate the other day—only mentally—about the curious number of instances in which parts of the human body have human names attached to them. In explanation of this fact the text-books have a stereotyped phrase which apparently has a universal application. For example, when mentioning, say, Jones's nerve, the authors add, "so named after the celebrated anatomist who first accurately described it." Everything is satisfactory in this regard so far as Fallopius's aqueduct, Nuck's canal, Corti's organ, Wharton's jelly and many others are concerned, but what about "Adam's apple"? Here the text-books are entirely silent, and they contain no such phrase as "so called after the celebrated first man, Adam." Who, then, was the first to give to the projection of our larynx this portentous cognomen? Suspicion points to Eve, and the discriminating scrutiny of things instinctively displayed by women rather lends colour to this theory. Of course, Adam and Eve's first garden party in Mesopotamia was a most exclusive affair, and thus Eve would feel quite free to express herself as she liked regarding Adam's apparent peculiarities without any fear of having her remarks subsequently repeated in the form of gossip. However, not being altogether satisfied with the theory above propounded, I consulted a book which contains a list of 230 "anatomical proper names, with their origin," and the following is the only reference therein which could be said to apply to Adam; "Adamus, Adam—first man. Pomum Adami." After this highly explicit statement I felt that the time had come, as the Americans say, "to change cars."

THE attendances at the meetings of the Society during the past quarter were again exceptionally good. At the discussion on appendicitis in February seventy-five members and visitors were present, while at the Clinical Evening last month the attendance book was signed by upwards of fifty members. The latter meeting was especially noteworthy by reason of the exhibit of a very interesting series of congenital deficiences of the upper extremity, the interest therein being greatly enhanced by the demonstration of the cases by means of the fluorescent screen by Dr. F. H. Low, so well known to the Society as an accomplished photographer and "skiagraphist." Excellent shadows of the various affected parts of the imperfectly developed limbs were obtained, and the value of this method of examination was very clearly proved.

This was the first occasion upon which the fluorescent screen was used before the Society, and Dr. Low's demonstration was productive of much interest and appreciation among the members and visitors present.

RATHER more than one hundred years ago there lived on Hammersmith Green a Mr. and Mrs. Loutherbourg—two most notorious quacks. They claimed to be able to cure "blindness, deafness, lameness, cancer, loss of speech, paralysis"—so says Dr. Jeafferson, in his entertaining "Book about Doctors"—simply by looking upon people and touching them. In common, however, with most of the quack fraternity their methods of business were "peculiar," and not altogether child-like and bland. Enormous crowds of would-be patients used to besiege their house; upon one occasion report stated that no less than 3,000 persons thus collected upon Hammersmith Green—rather a big out-patient department for one day, but, of course, the West London Hospital was not then in existence. No fees were taken; the system of gratuitous tickets was in vogue. Strange to say, however, these tickets found their way into the hands of venal persons who disposed of them to others in the crowd (who were tired of waiting) for sums varying from two to five guineas each, and it afterwards transpired that the barterers of the tickets were accomplices in the pay of the quacks.

PROFESSOR OSLER has accepted the invitation to be present at the Past and Present West London Hospital Dinner, which will be held on June 22 next.

THE staff of the West London Hospital and their friends are arranging to hold a dance this year in aid of the Hospital, to take place at the Empress Rooms on May 17.

WHY had Molière so much antipathy to medical men? As Dr. Brown says, "He began his career as a dramatic author with a fling at the doctors in his 'Médecin Volant,' and closed it twenty years later with the 'Malade Imaginaire.'" His satire is well shown in the following remark:—"The physician is a personage who is paid for talking nonsense by the sick-bed until Nature either kills or cures the patient." Surely if this was the best opinion that he could form of a medical man, Molière must have been very unfortunate in his medical attendants. In the time of Louis Quartorze, medicine, of

course, was a very inexact science, so much so that patients were in strict reality often called upon to suffer many things of their physicians, and indeed Molière, towards the end of his life, ceased to have any medical attendance, partly because it failed to afford him relief, and partly because, as he affirmed, he had not the strength to bear his disease as well as its remedies. But his antipathy to doctors probably began long before he had had much opportunity of submitting their capacity to the test, otherwise he would not have vented his satire upon them so early in his career as he did. Possibly he went to have a tooth taken out once in his youthful days, and the mistake was made of extracting the wrong one, and so he came to the conclusion that all doctors must be fools. It is a soul-disturbing thing to have an antipathy. Imagine, for example, the complacency with which, if a bull were colour-blind, he could gaze upon a red flag; instead of displaying a turbulent and proverbial animosity, he would simply continue to browse quietly in his pasture, happy in his ignorance of the reputation up to which he would be expected to live. If only, then, we could become metaphorically colour-blind to our antipathies—but I am moralising, and I do not pretend to be a philosopher.

P. D.

Notice.—All communications relating to the literary part of the JOURNAL, *books for review and exchanges, should be addressed to the Editor, 54, Wimpole Street, Cavendish Square, W. Applications for copies of the* JOURNAL, *communications respecting advertisements, instruments, pharmaceutical preparations, &c., intended for notice, should be forwarded to the Editorial Secretary, 124, Harley Street, Cavendish Square, W.*

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THE

West London Medical Journal.

Published Quarterly under the auspices of the West London Medico-Chirurgical Society.

Original Communications.

THE CAVENDISH LECTURE
ON
THE ETIOLOGY AND DIAGNOSIS OF CEREBRO-SPINAL FEVER.[1]

By William Osler, M.D., F.R.S., F.R.C.P.
Professor of Medicine, Johns Hopkins University, Baltimore, Md.

I. Summary of the features of cerebro-spinal fever as an epidemic.—II. Bacteriology of cerebro-spinal fever.—III. Diagnosis.—IV. Sporadic meningitis.—V. Note on treatment.

In practice we occasionally meet with a meningitis which is not tuberculous, which is not a complication of pneumonia or ulcerative endocarditis, and which is not a sequence of ear disease or of injury, and which is not a terminal infection in some chronic malady. As the meninges of both brain and cord are diffusely inflamed, we label the condition cerebro-spinal meningitis. At intervals, in certain regions, the cases multiply, and we then speak of epidemic cerebro-spinal fever. Until recently my experience, though somewhat varied, had been confined to a few instances in which the absence of the usual factors justified the diagnosis of the sporadic form of this disease. Within the past year a small outbreak in Baltimore has enabled me to study certain points in the etiology

[1] Read before the Society, June 16, 1899.

and diagnosis of this most interesting affection, and has thus determined my choice of a subject on which to address you.

I.—Summary of the Features of Cerebro-Spinal Fever as an Epidemic.

Upon these I shall only touch very briefly.

(*a*) One of the most fatal of all acute diseases, it fortunately takes a very humble position among epidemics as a destroyer. No fever attacks so few individuals in a community during its periods of prevalence; so that the general mortality may be but slightly increased. On the other hand, scarcely any known fever kills so large a proportion of those attacked. The recent epidemic in Boston illustrates this very well. Of 111 cases in three hospitals 76 died, a mortality of 68·5 per cent.

(*b*) The outbreaks occur in certain waves or periods, of which the fourth during the present century is at present prevailing in the United States. For several years there have been local epidemics of the disease in widely separated regions, usually in villages and country districts; but in 1896, 1897 and 1898 a slight epidemic occurred in Boston, and in the latter year cases began to be recognised in Baltimore and other towns. From a recent collective investigation, made under the direction of Surgeon-General Wyman, of the U.S. Marine Hospital Service (*Public Health Reports*, vol. xiv.), we learn that cerebro-spinal fever has prevailed during the past year (as a rule in a mild form) in twenty-seven States, and in the District of Columbia. It is not possible to say that the movement of troops last summer had anything to do with the spread of the disease. The limitation for a year or more to one district or city, without spreading to adjacent towns, the localisation even (as at present in Washington and Philadelphia) to special districts of a city, the recrudescence for several seasons in succession, are well-known features illustrated by the present epidemic.

(*c*) Among specific diseases cerebro-spinal fever stands in some points close to pneumonia. Sporadic cases of both occur in intervals of epidemic prevalence, though in pneumonia they are much more numerous, while epidemics of pneumonia, like those of cerebro-spinal fever, are most

striking in barracks, asylums and jails. Even when not prevailing as an epidemic there may be remarkable house epidemics of cerebro-spinal fever. The seasonal relations are the same in both, and the two diseases may prevail together. The abrupt onset, the great frequency of herpes in both, the leucocytosis, "the almost identical characters of the fibrino-purulent exudate in the two diseases" (Netter), the frequent complication of pneumonia in epidemic cerebro-spinal fever and of meningitis in pneumonia are additional points of contact. The degree of contagion is about the same in both diseases, and, lastly, it has been claimed that the organism described in cerebro-spinal fever is only a variety or a degenerate form of the pneumococcus.

On the other hand, Leichtenstern, speaking against the view that the pneumococcus is the cause of epidemic cerebro-spinal fever, says :—"Pneumonia is a disease spread over the entire earth, and appears at all times, there being no land immune from it. Epidemic meningitis is very rare, and in many countries is still unknown. Croupous pnuemonia attacks every age, the disposition increasing somewhat with increasing age, epidemic meningitis is a disease which affects children and young people; beyond thirty-five there is slight disposition to it. Croupous pneumonia has a typical course and a crisis; epidemic meningitis has no crisis. The complications of the two diseases are different, &c." (Quoted by Councilman, Mallory and Wright.[1])

II.—Bacteriology of Cerebro-Spinal Fever.

Until within the past few years the etiology of cerebro-spinal fever has been obscure, and a majority of observers regarded the organism found in the meningeal exudate as the pneumococcus, or a variety of it. More than twelve years ago, however, Weichselbaum described a diplococcus with special cultural peculiarities, which he regarded as the specific organism of the epidemic form of the disease. Little or no attention was paid to his communication until 1895, when his observations were confirmed by Jaeger. So little notice, indeed, had they attracted that neither Ormerod in "Allbutt's

[1] "Epidemic Cerebro-spinal Meningitis." A Report of the State Board of Health of Massachusetts. Boston, 1898.

System" (vol. i., published in 1896), nor Latimer in "Loomis and Thompson's System," published in 1897, mention Weichselbaum's organism. The work of Heubner,[1] in Germany, and more particularly the studies of Councilman, Mallory, and Wright, have fully confirmed the observations of Weichselbaum, whose organism, known variously as the meningococcus and the diplococcus intracellularis meningitidis, is now regarded as the specific cause of the disease. As the bacteriology of the subject is very fully discussed in the monograph by Councilman and his associates, and in the just issued article by Netter in vol. xvi. of the "Twentieth Century Practice," I shall confine my remarks to an account of our experience in the study of the cases which have been in my wards during the past year. To Dr. Norman B. Gwyn, who has charge of the bacteriological work in my clinical laboratory, and to Dr. N. McL. Harris, bacteriologist in the pathological department of my colleague, Prof. Welch, I am under special obligations for their careful study of the cases during life and after death.

The meningococcus in cover-slips made from the exudate has usually a diplococcus form, and lies within the polynuclear leucocytes; hence the definition *intracellularis*. Many of the cells may be stuffed with them. They may also occur free. It stains with the ordinary staining re-agents, and is decolorised by the Gram method. It grows best on Loeffler's blood serum, on which it forms "round, whitish, shining, viscid-looking colonies with smooth, sharply defined outlines, which attain a diameter of 1 to 1½ mm. in twenty-four hours" (Councilman). In cultures it is usually short-lived; but Netter states that Germano has found that it resists desiccation, and has preserved its vitality to the end even of ninety days. He states also that Neisser has shown that the organism is transportable by atmospheric currents, even the most feeble, and that it is very susceptible to aërial convection. It is found in the cerebro-spinal exudate, rarely elsewhere in the body; but it has been isolated from the blood, the pus from the joints, the pneumonic areas in the lungs and the nasal mucus.

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[1] *Jahrbuch für Kinderheilkunde*, 1891, and the *Deutsche medicinische Wochenschrift*, 1897.

The organism is feebly pathogenic for animals. Rabbits and mice resist subcutaneous inoculation. Heubner, and Councilman and his associates, have produced typical meningitis by inoculating cultures of the meningococcus beneath the spinal membranes of goats.

Our clinical and pathological experience with the organism is as follows:—In twenty-one cases which I have seen, the lumbar puncture was made in sixteen. In three patients seen in consultation the diagnosis seemed so clear that lumbar puncture was not made. In cases 1 and 2, both mild, the puncture was made, in one on the seventh day, in the other on the sixth; but no organisms were found. Cases 3 and 4 were admitted late in the disease, and it was not thought necessary to perform it. Of the remaining fourteen cases, in thirteen the diplococcus intracellularis was present on cover-slips and in cultures. In the remaining case its presence was doubtful on the cover-slips, and the staphylococcus grew in culture. Of the cases which came to autopsy, five in number, the bacteriological results, as given by Dr. Harris, are as follows:—Autopsy No. 1104; meningitis, meningococcus; the pneumococcus from a pneumonic area in the lung. No. 1189, a case with extensive arthritis, in which the diplococcus intracellularis was found in the blood and joint tissues during life, as well as from the meninges. *Post-mortem*, the meningococcus was separated in pure cultures from the cord and brain, and from the lung the pneumococcus and the bacillus lactis aerogenes; from the blood in the coronary arteries the pneumococcus. The other organs were sterile. In case 10 (Autopsy No. 1247), on which laminectomy had been performed, the spinal meninges at the time of his death (about two months later) were perfectly normal. At the operation the staphylococcus pyogenes grew in the cultures. In No. 1314, a case in which laminectomy was performed, the meningococcus was isolated from the meninges, both during life and after death. The bacillus coli communis, the bacillis lactis aerogenes, and the staphylococcus pyogenes albus were also isolated; from a broncho-pneumonic area in the lung the pneumococcus and the staphylococcus pyogenes aureus, from the spleen the staphylococcus pyogenes citreus, and from a thrombus in the superior longitudinal sinus and from the pelvis of the left kidney the streptococcus septicus

liquefaciens (Sternberg). This case had a diphtheritic and hæmorrhagic cystitis. No. 1364, a very protracted case, in which death occurred in the twelfth week, and from which the meningococcus had been isolated from the spinal fluid twice, from the meninges *post-mortem* the streptococcus pyogenes and the bacillus coli communis were isolated; and the staphylococcus pyogenes aureus and the baccillus coli communis from the broncho-pneumonic areas in the lungs. In a fatal case outside the hospital the meningococcus, the pneumococcus and the bacillus coli communis grew in cultures from the cerebral meninges. There was no focus of pneumonia in the lungs.

The following memoranda by Dr. Harris are of interest :—

"Cultural methods employed. In the first cases we followed the method recommended by Councilman; namely, the use of blood serum 'slants.' Such was found to be almost useless on account of contaminating organisms, for, out of a series of eight tubes, only one gave pure cultures.

"In the other cases the exudates and fluids were plated out in alkaline 5 per cent glycerin-agar. This procedure gave entire satisfaction in that the growth of the meningococcus was quite vigorous, and that associated organisms in the exudate (Cases 1314 and 1324A) were readily separated and classified.

"Upon certain points our observations agree with those mentioned in Councilman's article.

"(*a*) We have never seen, as Jaeger states, a capsule formation, nor in any case unassociated with other pyogenic organisms were we able to stain the specific organism by Gram's method.

"(*b*) The cases coming to autopsy at the height of the disease furnished upon cover-slip and culture abundant evidence of the presence of the meningococcus, whereas cases which succumbed late in the disease yielded feeble results, or, as in case 1364, no evidence at all.

"(*c*) The biological features of our several cultures gave practically the same results as Councilman obtained, except that in a few cases, after carrying the organism through several generations, litmus milk was found to be slightly bleached, but with no evidence of acid formation.

"Regarding potato culture, Councilman's statement of an invisible growth on this medium should be expanded by remarking that microscopic preparations invariably show evidences of moderate increase, and that the organisms are much larger than on ordinary media.

"At no time has a blood serum culture been observed to bear any striking resemblance to a growth of pneumococcus on a similar medium.

"As in Councilman's experience, great variations in viability of the organisms was noted. But it is worthy of mention that where there is condensation water in the tube and growth present in it, the organisms as a rule will be found to be alive many days after life has ceased in the growth upon the surface of the medium.

"*Staining reactions.* Supplementary to Councilman's remark upon focal staining points when using methylene blue, it might be said that if old Loeffler's methylene blue solution is used, the coloration of that focal point is a decided violet-red.

"*Animal experiments.* Subcutaneous inoculation in rabbits and mice (white and grey house mice) was resisted in every case.

"In rabbits inoculated beneath the dura mater, or into the ventricles of the brain, death occurred in all within fourteen days to six weeks, and in no instance were we able to find evidences of gross pathological lesions, nor the presence of the meningococcus on cover-slip or culture. The animals were all greatly emaciated.

"Mice inoculated into pleural or peritoneal cavities died in from three to four days, in most cases with general septicæmia.

"*Special remarks.* Regarding Jaeger's observation of the occurrence of chains of cocci in exudate or spinal fluid, it may be said that it has not been observed, but on blood serum growths it was quite common to find chain-formation with the unstained light line of cell division running parallel to long axis of chain. However, this feature is not by any means uncommon amongst the pyogenic staphylococci.

"Attempts to isolate the specific organism from any other site than the spinal fluid, and the meninges of spinal cord and brain, have in every case been attended with failure. This is especially noteworthy in case 1189, which presented arthritis. A large quantity of the sero-purulent fluid was inoculated, incubated for three days, and the plates were found sterile, and yet cover-slips of the fluid showed considerable numbers of intracellular diplococci. The heart's blood of this case failed to give positive results at autopsy, although during life the organism had been isolated from the blood as well as from the joint lesion.

"Pneumonic or broncho-pneumonic foci have always given the pneumococcus, either alone or with the pyogenic staphylococci.

"One case, No. 1314, brings out a possible source of error in the use of Gram's stain upon the cover-slip preparations of the exudate in cases where a secondary infection may be present. The cover-slips from the meningeal exudate in this case were examined by Gram's method before cultures were ready, and cocci were found which did not decolorise, thus causing some surprise, but it was cleared of doubt by finding the staphylococcus pyogenes albus in association with the meningococcus upon the agar plate.

"Case 1325A is most interesting in that from the exudate on the cerebral meninges the meningococcus, the pneumococcus and the bacillus coli communis were isolated and positively identified. A mouse was inoculated intra-pleurally with 3cc. of a twenty-four hour old blood serum condensation-water growth, and succumbed upon the third day with a general infection.

"Another mouse received 5cc. of a strong suspension in Durham's medium of a twenty-four hour old agar-agar culture of the pneumococcus, but showed no evidence of illness. The milk culture of this organism when stained by Welch's capsule stain exhibited well-defined capsules and stained by Gram's method.

Microbic Association in Cerebro-Spinal Fever.—Councilman, Mallory and Wright state that "Mixed infections with other

organisms were not uncommon. The pneumococcus was found seven times, once in connection with Friedländer's bacillus. Terminal infections with staphylococci and streptococci were occasionally found."

Netter refers to this point in the following terms:—"In a very small number of cases observers have reported finding at the same time with the pneumococcus or the diplococcus the staphylococcus pyogenes, the streptococcus, the colon bacillus, the bacillus proteus, and the capsulated bacillus. These microbic associations are always secondary, however, and we must refrain from regarding any but the two agents above described as the primary causes of cerebro-spinal meningitis."[1]

In the report on the bacteriology of the *post mortems* by Dr. Harris, the frequency and number of microbic associations will have been noticed. Three points are of interest in this connection:—In chronic cases, as 10 and 17 of our series, the diplococcus intracellularis may no longer be present; we have obtained it, however, for the first time on the 25th, 31st and 41st days of the disease. Of the two cases referred to, No. 17 presented a most typical picture of the disease, and the diplococcus intracellularis was obtained in the spinal fluid on the 31st and 35th days. At the autopsy the meninges showed a moderate amount of exudate, and there was fluid (purulent) in the posterior horns of the ventricles. The diplococcus intracellularis was not found, but the streptococcus pyogenes and the bacillus coli communis were isolated from the meninges.

Case 10 is of particular interest, and I give here a brief summary of the history:—

A sailor, John F., aged 25, was admitted October 29, 1898. The illness had begun on October 26, with swelling and pains in the right ankle, and the next day the left ankle became swollen, and then the right hip. He was able, however, to walk to the hospital. On admission there were also redness and tenderness of the left wrist. For the first week we were very doubtful as to the nature of his trouble. The temperature was between 102° and 104°, and we rather suspected typhoid fever. On the 31st he complained of pain in the back and hips, and on November 1 it was noticed that his head was in a very retracted position. On November 4 he had retention of urine. On the 6th it was noticed that he could not move his legs. Lumbar

[1] *Loc. cit.*, p. 193.

puncture was then performed, and two drachms of a thick creamy pus removed which showed cells and numbers of diplococci, some in cells, but a majority free and in groups. Dr. Cushing performed laminectomy, and drained away a large amount of purulent exudate, and irrigated the spinal meninges with normal salt solution. Cultures made from the fluid obtained by the lumbar puncture and at the operation grew the staphylococcus pyogenes aureus. From the history and symptoms the case was doubtless one of cerebro-spinal fever, subsequently infected with the staphylococcus.

More frequently the pneumococcus has been found in association with the diplococcus intracellularis. In our series it was present only once (Case 13) in the fluid obtained by lumbar puncture. On the 5th day 20 cc. of a faintly cloudy fluid were removed, and both organisms grew in culture. On the 7th day the pneumococcus was isolated from the blood. Netter found the pneumococcus associated with the diplococcus intracellularis (*post-mortem*, I take it, though it is not so stated) in ten of sixteen cases of cerebro-spinal meningitis.

A third point is the occasional association of the tubercle bacillus with the diplococcus intracellularis, but so rarely that it is not a point of much practical importance.

On the whole, then, our observations support those of Weichselbaum, Jaeger, Heubner, Councilman and others, that in epidemic cerebro-spinal fever there is an organism with special cultural peculiarities which may reasonably be regarded as the exciting cause of the disease. Netter alone, among recent observers, seems to doubt this, and says that he only found the diplococcus intracellularis in 16 out of 39 cases, and in 10 of these the pneumococcus was present at the same time. His most recent statement in the "Twentieth Century Practice" (1899) is worth quoting: "Certain observers, and more particularly Jaeger and Heubner, believe that the diplococcus intracellularis is the sole pathogenic agent in epidemic cerebro-spinal meningitis, and that the pneumococcus has no influence whatever in the production of true epidemic meningitis. Councilman is a little less emphatic, although he appears disposed to adopt this way of thinking. I do not, however, in any way accept this view. The pneumococcus can, without any doubt, cause meningitis, and in spite of Heubner's experience, the *rôle* of the pneumococcus has been most surely established experimentally. The

frequent occurrence of pneumonia complicating meningitis and of meningitis complicating pneumonia, and the coincidence with meningitis of many other inflammations which may be excited by the action of the pneumococcus, imply that between pneumonia and meningitis there exists a relation which cannot be denied." He seems to think that the diplococcus intracellularis may be a degenerate form of the pneumococcus, and in support of this view cites: "Its intracellular position is evidence of a phagocytosis going on, the impossibility of cultivating most of the individuals, as shown by the small number of colonies obtained, its decolorisation by Gram's method, and its usual inocuousness in animals. I would not, however, insist upon this opinion, or lay too much stress upon the arguments just mentioned, for the question is only hypothetical as yet."

It does not seem to be altogether clear from certain of Netter's observations that he has been dealing with the meningococcus. Thus in his communication (*Bull. et mem. Soc. Med. dez Hop. de Paris*, xv., p. 407, 1898) the coccus which he found in the 8 cases was rounded, usually in pairs, sometimes in short chains; at other times capsules were seen. They stained by Gram's method, and in bouillon long chains developed, and mice resisted infection when inoculated subcutaneously. He concludes from these observations that the miningococcus is nothing more than a degenerate pneumococcus. Dr. Harris, in a note on this, remarks: "Such conclusions are entirely unwarranted, or if his observations are correctly stated, he evidently had the veritable pneumococcus to deal with, and by some strange mode of reasoning concludes that he has the meningococcus in his series of cases, and that it is identical with the pneumococcus, though of a degenerate form!"

Netter's position is most illogical and confusing. Throughout the article in the "Twentieth Century Practice"—in many ways one of the very best in literature—he assumes that the specific disease, cerebro-spinal fever, may be caused either by the pneumococcus or the diplococcus intracellularis. That a primary cerebro-spinal meningitis may be due to the pneumococcus is universally acknowledged; but it is in the highest degree unlikely that a remarkable specific affection like cerebro-spinal fever should be caused by two different or-

ganisms. Towards the close of the article the inconsistency of this view seems to impress him, for he says certain peculiarities "prevent us from concluding that the two diseases (*i.e.*, pneumonia and cerebro-spinal fever) are absolutely identical."

III.—Diagnosis of Cerebro-Spinal Fever.

Meningitis is not always easy to recognise clinically. Mortifying *post-mortem* disclosures are even more common with it than with pericarditis. The unexpected meningitis of pneumonia, of Bright's disease, and of other chronic affections, teaches us how latent may be the process; on the other hand, who has not in typhoid fever and in pneumonia made a positive diagnosis of meningitis, and has found *post mortem* the cerebro-spinal membranes perfectly free. Sooner or later the truth of Stokes' dictum is brought home to each one of us: "There is no single nervous symptom which may not and does not occur independently of any appreciable lesion of the brain, nerves or spinal cord." The anatomical classification of lepto-meningitis is not very satisfactory, and, as I have stated, there is great lack of uniformity in the terms employed. The nomenclature of the Royal College of Physicians recognises four groups—purulent, tubercular, syphilitic, and cerebro-spinal fever. An etiological classification, possible to-day in part, is of necessity incomplete. In the annexed diagram I have made a provisional grouping of the chief forms:—

Acute Lepto-Meningitis.	Primary.	1. Of cerebro-spinal fever.	(*a*) Sporadic. (*b*) Epidemic.	Diplococcus intracellularis.
		2. Pneumococcic.	Meninges alone involved or in a general pneumococcus infection.	Pneumococcus.
	Secondary.	1. Tuberculous		Bacillus tuberculosis.
		2. Pneumococcic.	(*a*) Secondary to pneumonia, endocarditis, &c. (*b*) Secondary to disease or injury of cranium or its fossæ.	Pneumococcus.
		3. Pyogenic.	(*a*) Following local disease of cranium or a local infection elsewhere. (*b*) Terminal infection in various chronic maladies.	Various forms of staphylococci and streptococci,
		4. Miscellaneous acute infections.	In typhoid fever, influenza, diphtheria, gonorrhœa, anthrax, actino-mycosis and other acute diseases.	Typhoid bacillus, influenza bacillus, diphtheria bacillus, gonococcus, &c.

The acute primary lepto-meningitis in a large proportion of all cases follows an infection with the diplococcus intracellularis or the pneumococcus. It will be a great gain if Still's observations (to which I shall refer later) on the posterior meningitis are confirmed. I do not know where Quincke's meningitis serosa should come in an etiological grouping. Of three cases diagnosed as such in our records, in one a micococcus was isolated, but nothing further is stated as to its identification. It is highly improbable that, as Netter holds, cerebro-spinal fever either in the sporadic or epidemic forms is caused by the pneumococcus. The body of evidence accumulated within the past few years in Germany and America is strongly in favour of the specific relationship of a definite, easily recognised organism, the diplococcus intracellularis. The pneumococcus may produce a primary meningitis, and pneumonia at certain seasons and in certain regions may frequently be associated with this lesion, but both clinically and bacteriologically this form can be distinguished from the disease under consideration.

While the possibility of the occurrence must be admitted, I have not recognised a primary meningitis caused by the pyogenic organisms[1] or by the tubercle bacillus. The terminal meningitides I have placed among the secondary forms; and, as in the terminal pleurisies and peritonitides, a variety of organisms are found. Even in cerebro-spinal fever the streptococci and staphylococci, always on the watch for a *locus minoris resistentiæ*, may drive out the original foe, as in cases 10 and 17 on our list.

To the secondary forms of meningitis in the table I shall not refer, except to call attention to the importance of the pneumococcus in this group also; nor can I discuss within the limits of this lecture the clinical features of the varieties of meningitis, and must confine my remarks to a few special points in the diagnosis of cerebro-spinal fever, and to a consideration of certain sporadic forms of meningitis.

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[1] The case of John Brooks (autopsy No. 1065) is of interest in this connection. He had an illness of eight weeks' duration, with obscure cerebral symptoms. On admission he had a urethral discharge. At autopsy there was found an extensive cerebral meningitis, with distension of the ventricles and slight meningitis of the dorsal cord. From the exudate and from the urethral discharge streptococci and staphylococci were isolated. The slight urethral secretion might readily have been overlooked, and the case regarded as a primary pyogenic meningitis.

I.—*Certain features in the symptomatology of cerebro-spinal fever.*—No other form of meningitis presents a symptomatology of the same fulness—general, cerebral, spinal, and peripheral features are present in almost every case. This results in

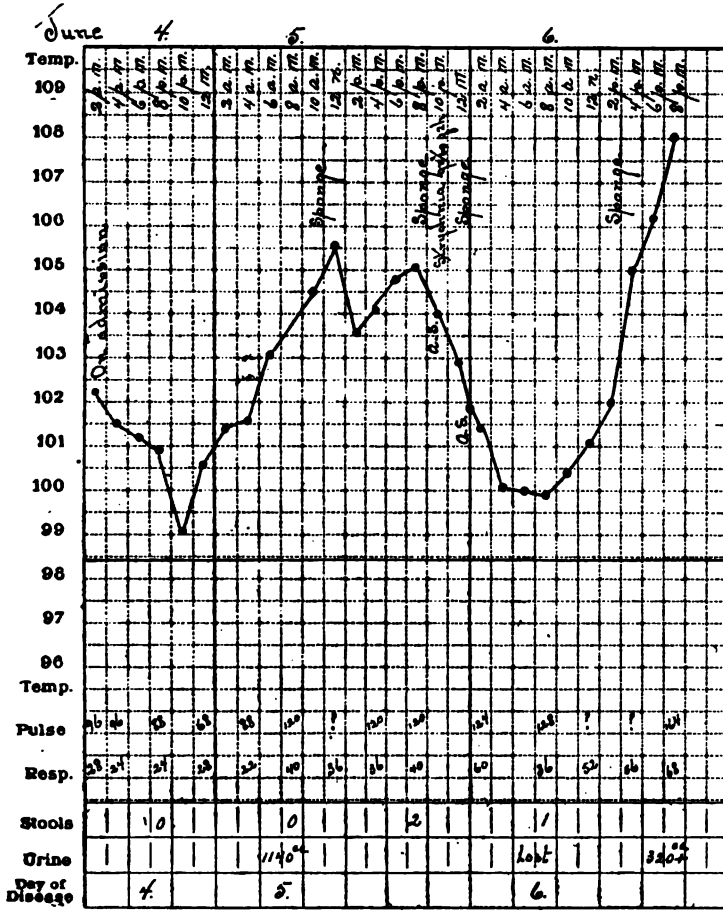

CHART I., CASE 7. E. R.

part from the extent of the cerebro-spinal involvement, in part from the very frequent implication of the nerves, and to some degree is a consequence of the very chronic course. I shall discuss only a few of the important symptoms.

(*a*) *Onset.*—In striking contrast to other forms, particularly the tuberculous, cerebro-spinal fever sets in abruptly. Without warning, while at work, or awakening the patient from a sound sleep, comes the pain in the head, &c. This peculiarity may also be met with in primary pneumococcic meningitis; but in the form secondary to pneumonia, and in that which arises in endocarditis, latency of onset is the rule.

(*b*) *Fever.*—There is no constant type of fever in any form of meningitis. In cerebro-spinal fever the pyrexia is very variable, and I have given here a few charts in illustration. There may be no fever at onset—as shown in Charts VIII. and IX. of the sporadic cases. Of our epidemic cases, all had fever on admission.

Irregularity in the fever may be present from the start. There is not a steady rise at first to a fastigium, but even on the third or fourth day the temperature may fall to normal. Chart I. shows this extreme irregularity in a two-hour record. The remissions were very pronounced, and the temperature rose to 108° just before death.

In other cases the course is singularly like that of typhoid fever, and for days the two-hour temperature chart may not show a variation of more than a degree. This is well illustrated in Chart II. from Case 17. This patient (as shown on the lantern slide) had the facial aspect of a case of typhoid fever. Chart III. from Case 13 shows also a very steady fever with but slight remissions to the time of death on the fifteenth day. Chart IV. from Case 15 presents a still more marked resemblance to a typhoid fever curve, particularly in the daily remissions, giving the spiked chart with which we are all so familiar in the third week of the disease. Intermissions, exacerbations, and great irregularities similar to those in tuberculosis, are very pronounced in the more chronic cases. Chart V. from Case 16 gives the maximum and minimum daily temperature from the twenty-ninth to the seventy-ninth day. It will be noticed how variable is the time of the highest point of daily fever. On thirteen days the maximum temperature was in the morning—an inverse type, to which many writers have referred, in this disease. The exacerbations are better shown in a two-hour record. In Chart VI. fro 1 Case 15 the intermittent type is shown, but the paroxysms are readily distinguished from those of tertian malarial intermittent fever by their prolonged course.

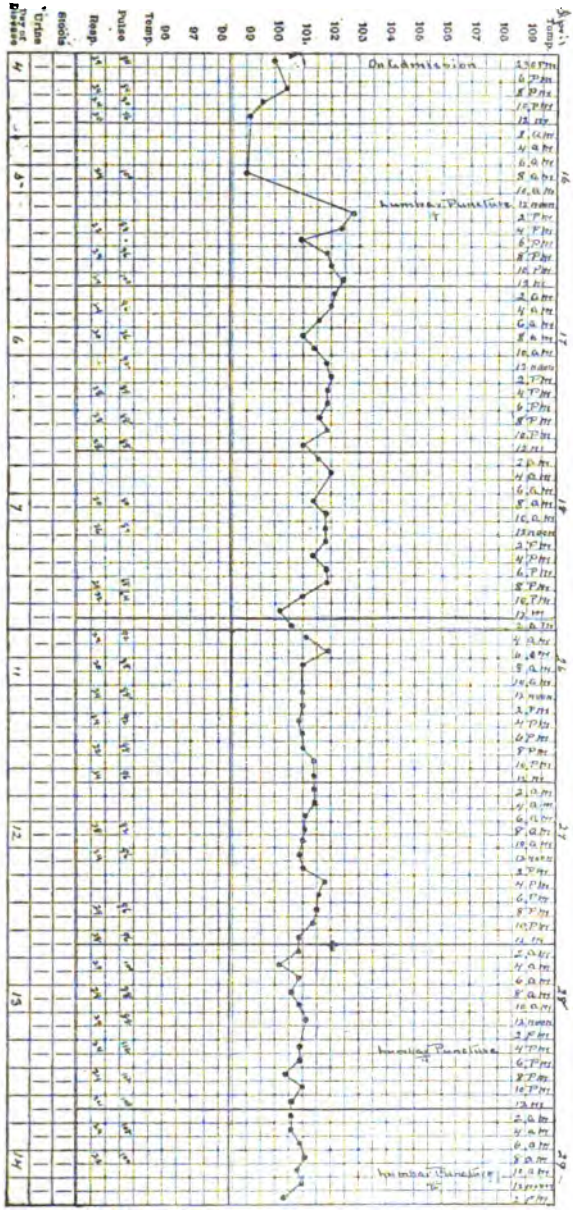

CHART II., CASE 17. P. C.

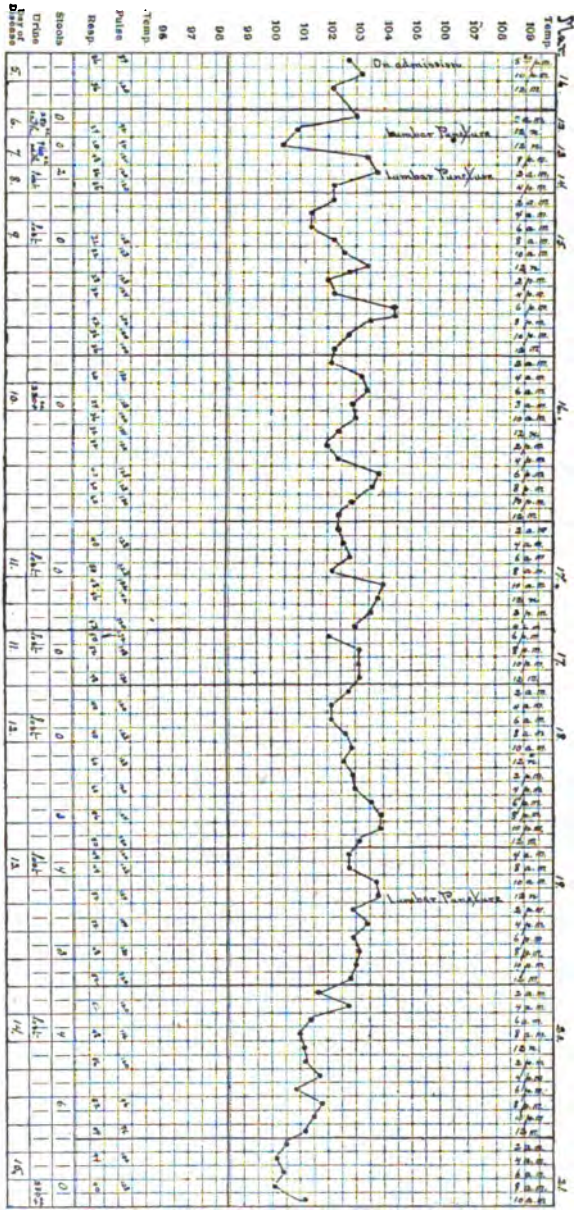

CHART III., CASE 13. O. S.

In cases of this sort, when chills occur, the picture is very suggestive of malaria, and one can understand why some of the older writers regarded the disease as a manifestation of paludism. The chart of Case 8 is worth a passing comment. After a very steady temperature on the ninth, tenth and eleventh days the record on the twelfth day was normal. On the thirteenth day there was a paroxysm without a chill, lasting from 10 p.m. on June 19 to 4 a.m. on the 21st. On the fourteenth and fifteenth days the temperature was normal. On the evening of the latter the fever rose, and the paroxysm

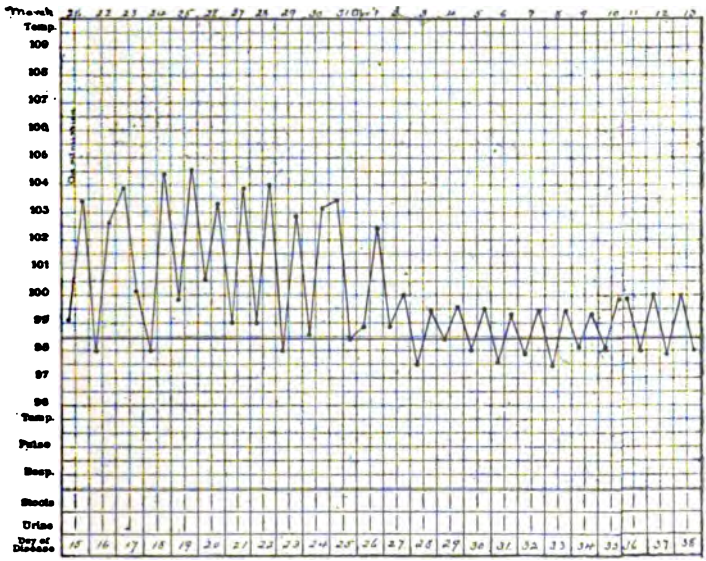

CHART IV., CASE 15. J. N. M.

lasted through the sixteenth day, and at 4 p.m. the patient complained of decided chilliness. On the seventeenth day no fever. At 10 a.m. on the eighteenth day the patient had a rigor, in which the temperature rose to 104·5°; the paroxysm lasted more than thirty hours. Then, on the twentieth, twenty-first, and twenty-second days he had recurring attacks, two with chills; the one on the twenty-second, without chill, extended into the twenty-third day. After this the patient's temperature remained normal, and he recovered rapidly. During these attacks he complained a great deal of pain in

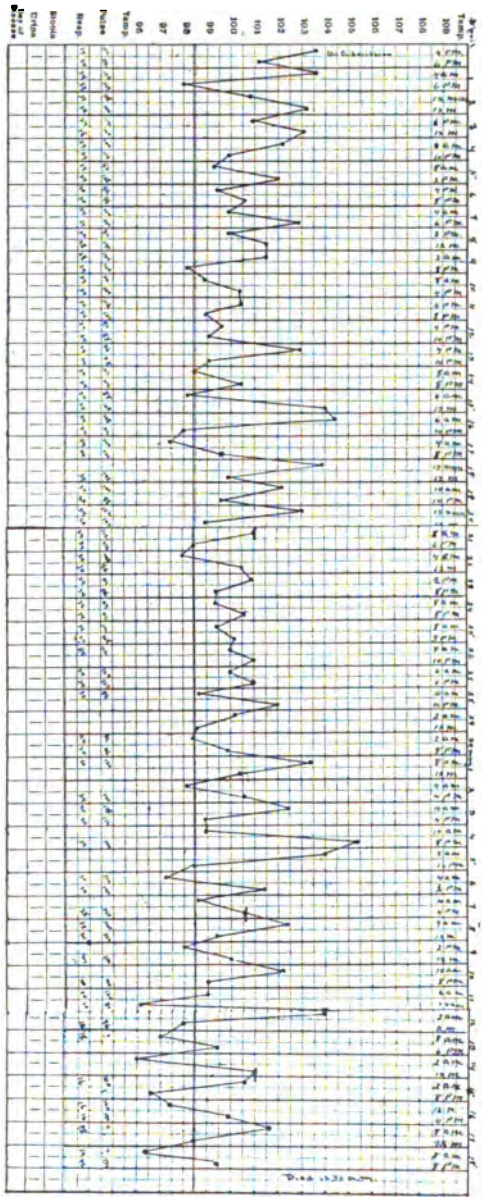

CHART V., CASE 16. CHAS. A. K.

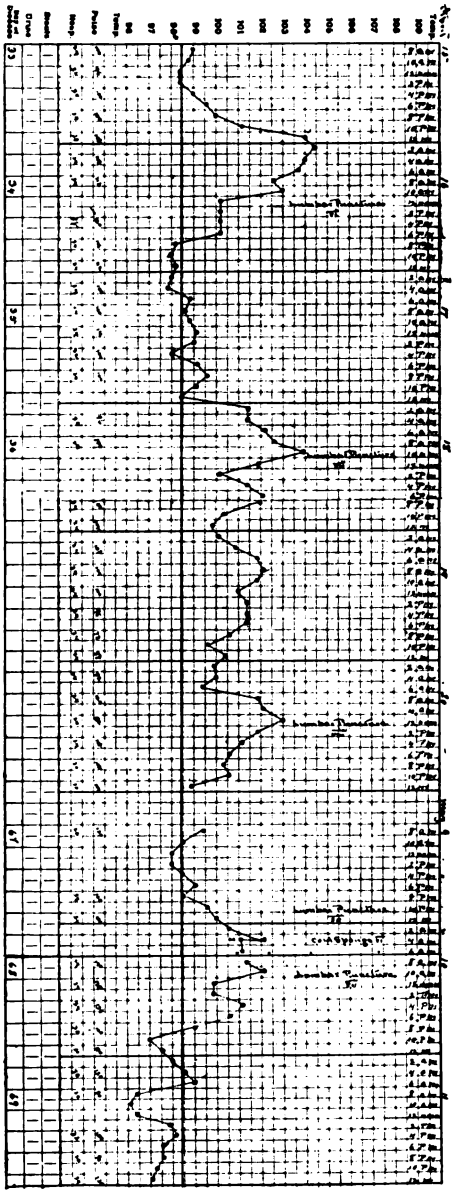

CHART VI., CASE 15. J. N. M.

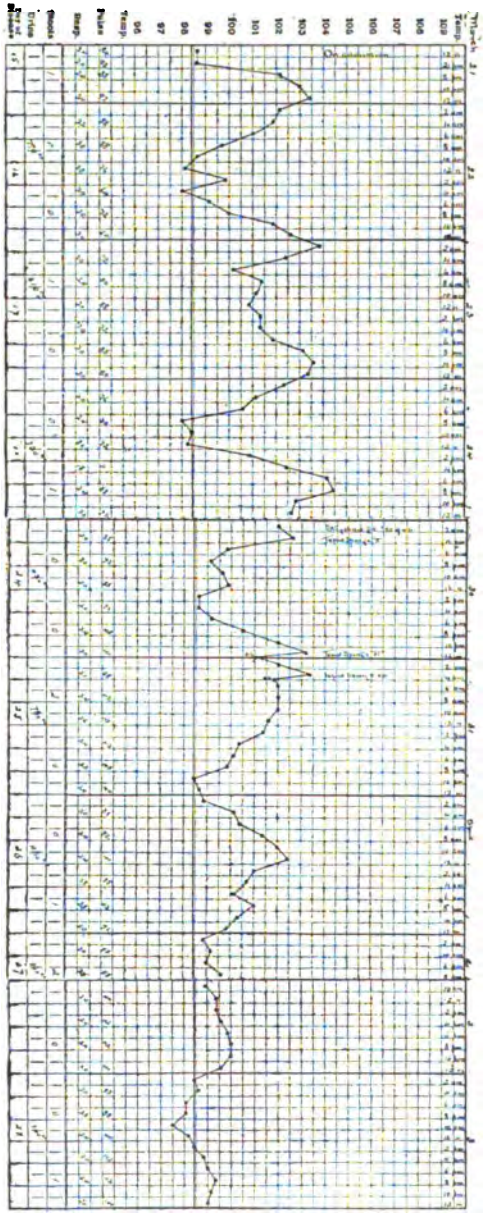

CHART VII., CASE 15. C. A. K.

the head and back. The spleen was not enlarged. The blood was examined daily for the malarial parasites, but none were found. And lastly, Chart VII. from Case 15 illustrates the relation of the temperature to the lumbar puncture. After the sixth, seventh, and eighth puncture the fever dropped; after the twelfth it rose.

(*c*) *Skin Rashes.*—Various skin rashes are common in cerebro-spinal fever, and form an important feature in the diagnosis. Of twenty-one cases which I saw during the epidemic, in thirteen a skin eruption of some form or other was present. Herpes, of course the most common, was present in eight cases. A diffuse erythema about the chest and abdomen, and over the joints, was present in four cases. Petechiæ were noticed in eight cases, extensive in only three. In three cases a very remarkable and peculiar rash was present in the neighbourhood of the joints, particularly over the extensor surfaces of the knees and elbows, and about the ankles. There was a diffuse, livid erythema of great intensity, on which a purpuric herpes developed—a vesicular rash, the individual vesicles of which became filled with blood. As the erythema faded and the vesicles dried, they could be felt as little nodular hemispherical bodies, which persisted for a week or ten days.

(*d*) *Blood.*—A careful study of the blood was made in all of our cases. A leucocytosis was present in every instance. In four the first blood count was made on the third day, and the leucocytosis was 25,900, 14,500, 40,800, and 32,000 per cm. The first blood count was made on the fourth day in four cases, and the leucocytosis was 26,240, 31,800, 19,300, and 7,600 per cm. In only four cases did the leucocytes exceed 40,000 per cmm., and the maximum count was on the ninth day in a fatal case 47,000 per cm. The leucocytosis persists even in the most protracted cases. In a lad who died in the twelfth week of the disease the leucocytes were 23,000 per cm. shortly before death. As a rule there was no special reduction in the red blood corpuscles. In one case a moderate anæmia developed, and in the fifth week the red corpuscles were only 3,100,000 per cmm. In one case the diplococcus intracellularis was isolated from the blood during life.

Leucocytosis has no special value in the differential diagnosis of the various forms of meningitis. I had an impression that

it was not so constant in the tuberculous variety, but Dr. Parfitt analysed the records in eleven of our cases and found that in only three was a leucocytosis absent. The lowest count was 6,500 per cm. Of eight cases with leucocytosis there were four with 20,000 or more white corpuscles per cm. The highest count was in a child aged 8, 24,333 per cm. Altogether the leucocytosis seems not to be so high or so persistent in the tuberculous meningitis.

(*e*) *Arthritis*, or more often periarthritis, much more common in cerebro-spinal fever than in other forms, was present in two of our cases. In Case 7 the joint lesion came on with great rapidity, and by the fourth day he had a multiple suppurative arthritis, resembling an acute pyæmia. The diplococcus intracellularis was isolated from the pus in the joints. In the other (Case 10) the disease began with arthritis.[1]

II.—*Kernig's Sign.*—Described by a Russian physician, and studied in Germany and France, this interesting sign has not attracted the special attention of English and American physicians, though J. B. Herrick, of Chicago, at the last meeting of the Association of American Physicians, spoke of its value. It has been present in all of our cases in which it has been looked for. It is, I think, an old observation that the subjects of protracted meningitis, particularly children, very often lie with the thighs flexed upon the abdomen, and with the legs in a state of partial contracture, so that they are with difficulty extended. To test for Kernig's sign the patient should be propped up in bed in the sitting position, then, on attempting to extend the leg on the thigh there is contraction of the flexors which prevents the full straightening of the leg. On the other hand, in the recumbent posture the leg can be fully extended. Many patients with meningitis are not in a condition to sit up, and the test can be equally well made by flexing the thigh on the abdomen, when on attempting to extend the leg, if meningitis be present, the limb cannot be fully extended, as shown in fig. 1. Friis found the sign in fifty-three of sixty cases, and Netter in forty-five of fifty. It is stated to be present in all forms of meningitis when the spinal meninges are involved. The presence of the sign is no

[1] A full report of these cases is given in the *Boston Medical and Surgical Journal*, December 29, 1898.

indication of the intensity of the spinal involvement, as it existed in a very marked degree in a recent case of pneumococcic meningitis, in which there was no positive exudate on the spinal meninges, only a turbid fluid. Netter's explanation of the phenomenon is as follows: "In consequence of the inflammation of the meninges the roots of the nerves become irritable, and the flexion of the thighs upon the pelvis when the patient is in the sitting posture elongates and consequently stretches the lumbar and sacral roots, and thus increases their irritability. The attempt to extend the knee is insufficient to provoke a reflex contraction of the flexors

FIG. 1.—Kernig's sign, showing the strong contraction of the flexors on attempting to extend the leg.

while the patient lies on his back with the thighs extended upon the pelvis, but it does so when he assumes a sitting posture."

III.—*Lumbar Puncture.*—During the past ten years no single measure of greater value in diagnosis has been introduced than Quincke's lumbar puncture. We are now able in a large number of cases to make a prompt decision as to the existence of meningitis, and are further enabled to recognise the form of the disease. I shall not detain you with details of

the technique, available now in all text-books, and recently considered at great length in an elaborate "Referat" by Neurath, in the *Centralblatt f. d. Grenzgebiete der Medizin und Chirurgie, Bd. I.* It is a simple, quite harmless procedure, and in a majority of the cases can be done without general anæsthesia, or with the aid of a local freezing mixture. A dry tap is rare in cerebro-spinal fever; the needle may be plugged with fibrin, or a nerve root may come directly against the orifice. Puncture in the third or fourth interspace may be negative, while in the second a free flow is secured. In one of our early cases in which no fluid was obtained, the autopsy showed an exudate as thick as butter, with little or no fluid. A first puncture in a case is very often negative. Though simple, the technique is, like other procedures of the kind, bettered by practice. Very often at first a few drops of blood flow, then a clear or turbid fluid, either drop by drop, or sometimes in quite a strong stream.

The fluid may be clear, turbid, purulent, or more rarely a brownish yellow or quite bloody. In a great majority of all cases when meningitis is present the fluid is turbid. In rare instances clear fluid may be obtained when meningitis exists, and in a protracted case the fluid may be turbid at one puncture and clear at the next. Several observers have noted that the fluid may become clear in the intermissions of the disease. A clear fluid may be obtained from a puncture in the second lumbar interspace, while lower down a turbid fluid may be withdrawn. I saw this possibility very well illustrated in a recent *post mortem;* the fluid in the lower dorsal and upper lumbar regions was perfectly clear, while that in the lower lumbar and the sacral regions of the canal was very turbid and contained numerous flocculent masses.

The fluid should be allowed to flow into a sterilised test-tube. When the fluid is at all turbid there is usually a slight sediment and a coagulation of fibrin. Cover-glass preparations are made either directly from the turbid fluid, or if the turbidity is slight and the cell elements few in number, after it has been centrifugalised. Cultures should be prepared at the time of making the lumbar puncture by allowing one or two cubic centimètres of the fluid to flow on to a Loeffler blood serum medium.

The amount of fluid obtained varies from a few drops to

130 cc. The samples in these flasks show the large amount which may be removed, one 126 cc., another 112 cc.

Wentworth claims that within certain limits there is some relation between the degree of turbidity of the fluid and the severity of the symptoms, and this was borne out by our more limited experience. Even in the most protracted cases the turbidity may persist. Only once was a clear fluid removed in an exacerbation. On several occasions a bloody fluid was removed in case 18. In the wards at the same time was a remarkable instance of septic meningitis in which, after turbid fluid had been withdrawn at one puncture, at a subsequent one, before death, blood flowed from the needle, and *post mortem* there was extensive meningitis and a rupture of the basilar artery with hæmorrhachis.

The number of the organisms found bears no constant relation to the intensity of the symptoms. In acute cases they are present, as a rule, in large numbers. The later the disease, the less likelihood is there to find the diplococcus intracellularis in the fluid; but we have found them in the second, third, fourth, fifth and seventh week. The following are some of the days on which the organisms were found: seventeenth day, fourteenth day, twenty-fifth day, thirty-first day, forty-first day, and nineteenth day.

Has the lumbar puncture any therapeutic value? Williams, of Boston, states that he has seen beneficial effects, and there are a few cases in the literature in which the severity of the symptoms were promptly mitigated by the removal of a variable amount of the spinal fluid. Wentworth (whose experience has been very large), speaking of these cases, says: "I have never seen any such cases, though constantly on the watch for them. A temporary relief, lasting for a few hours, has followed the operation in a few cases, but the same remissions frequently occur without any treatment." Netter says that he has seen convulsions, which had lasted for a long time without intermission, cease after the withdrawal of only about two drachms of fluid.

We have given this point our closest attention, and many times have performed the puncture directly for its supposed benefit. In case 8 the note reads: "Much better after the first puncture; brighter every way." Case 9, puncture at 11 a.m.: "Patient's condition has greatly improved; the

muttering has ceased, and the irregular movements are less marked." To case 16 I may refer more fully. It was an example of the chronic form in which the patient lingered for nearly three months. The accompanying table has been prepared by Dr. Marshall, one of my house physicians. It gives the day of the disease, the amount of fluid withdrawn, the character of the exudate, the microscopal appearances, the culture results, the leucocytosis, and the effect (?) of the puncture on the temperature. The first puncture, made on the twenty-ninth day of the illness, was negative. From the second puncture 100 cc. of a yellowish turbid fluid were withdrawn, which contained pus cells and intracellular cocci in abundance, and the cultures were positive. In all seventeen punctures were made between the twenty-ninth and the seventy-fifth day of the disease, of which fourteen were positive. A turbid pale yellow fluid was removed at each tapping. On five occasions 100 cc. or more were obtained, once 125 cc. and once 126 cc. Following the two first effective tappings the patient appeared better, the temperature dropped, and he seemed much brighter, but he soon became worse, and the fever rose. Following the sixth, seventh, eighth, and eleventh punctures the temperature fell, 4·5°, 3·8°, 4·2°, and 5·8°. There was no change in the general condition, though he sometimes was a little brighter, and the drop in fever followed so directly that it seemed only natural to attribute the good results to the lumbar puncture. The thirteenth puncture was practically negative, yet the temperature fell 5·1°, and after the fourteenth tapping the temperature rose 2·6°. Evidently not the withdrawal of the fluid, but the peculiar character of the disease, already spoken of, was responsible for the remissions. The chart illustrates further the persistence of the leucocytosis, and the sterile characters of the fluid after the forty-fourth day. I have here for demonstration the lumbar portion of the cord and its membranes. The position of the last puncture can be seen, and the repeated operations have caused a slight hæmorrhagic pacchymeningitis.

IV.—Sporadic Cerebro-Spinal Fever.

To what extent do isolated cases of cerebro-spinal fever occur in the intervals between the epidemic prevalence?

CASE XVI.—KRATZ—LUMBAR PUNCTURE CHART.

Puncture No.	Day of Disease.	Amount.	Character.	Microscopically.	Cultures.	Leucocytosis.	Temperature.
1	29	Negative	... ...	... ...	...	...	Unchanged.
2	31	100 cc.	Yellow; turbid.	Pus cells; intracellular diplococci.	Positive.	17,400	Dropped 2·4°
3	35	125	Yellow; turbid.		Positive.	25,300	,, 1·0°
4	37	90	Pale yellow; turbid.	Pus cells; no cocci.	Negative.	19,900	,, 2·0°
5	40	85	Pale yellow.	Pus cells; no cocci.	,,	28,000	,, 1·0°
6	44	126	Pale yellow; cloudy.	Intracellular diplococci.	,,	15,000	,, 4·5°
7	46	100	Pale yellow; turbid.	Pus cells; no cocci.	,,	22,000	,, 3·8°
8	48	50	Pale yellow; turbid.	Pus cells; no cocci.	,,	19,000	,, 4·2°
9	54	30	Pale yellow; turbid.	Pus cells; no cocci.	,,	23,600	Rose 0·8°
10	59	Negative.	... ...	... ...	...	...	Unchanged.
11	59	100 cc.	Cloudy.	Pus cells; no cocci.	,,	...	Dropped 5·8°
12	62	60	Cloudy; blood-tinged.	Pus cells; no cocci.	,,	18,000	,, 3·4°
13	68	3	... ...	... ...	,,	32,000	,, 5·1°
14	70	75	Cloudy.	Pus cells; no cocci.	,,	47,500	Rose 2·6°
15	73	Negative.	... ...	... ...	...	23,000	Unchanged.
16	75	Negative.	... ...	... ..	...	...	Unchanged.
17	75	8 cc.	Cloudy.	Pus cells; no cocci.	,,	...	Unchanged.

What is the nature of the primary suppurative meningitis which is met with from time to time in all communities? Neither hospital statistics nor the ordinary death returns give trustworthy answers to these questions. The diagnosis of meningitis is often doubtful, and it is very probable that a great many cases are returned as cerebro-spinal meningitis which are the cerebral forms of typhoid fever or of pneumonia. It is surprising how much confusion there is in the diagnosis of the different forms, and the urgent need of a more accurate recognition of the varieties is well shown by the number of terms used in the tabulation of cases. Thus, not to speak of the tuberculous form, which is often spoken of as basilar meningitis, the terms most frequently used are acute meningitis, meningitis simplex, purulent meningitis, and septic meningitis. In a recently issued report on sporadic cerebro-spinal meningitis from the Philadelphia Hospital, by L. N. Boston (*Medical News*, May 20, 1899), exclusive of the tuberculous variety, the following names occur as designating the varieties of acute meningitis: lepto-meningitis, basilar meningitis, pachy- and basilar meningitis, basilar and lepto-meningitis, hæmorrhagic meningitis, and purulent meningitis.

To reach uniformity in this matter is not at present possible, but we may welcome the steps which have been taken towards separating the different forms of the disease.

In the last *Census Report of the United States*, the returns for the census year 1890, a year in which cerebro-spinal fever, so far as I know, did not prevail to any extent in epidemic form, the number of deaths reported from cerebro-spinal meningitis were 3,333, a large percentage of these during the first year of life.

From the *Fifty-Ninth Annual Report of the Registrar-General*, 1896, I gather that the deaths from cerebro-spinal fever in England from 1877 to 1896 (inclusive) have only once exceeded 50 per annum. There has been a great reduction in the return since 1887, 233 cases for the ten years ending 1896, against 406 for the previous decade. In Scotland there were only six deaths from cerebro-spinal fever in 1895, and five in 1896. In Ireland there were seventy-six deaths from this cause in 1896, and the same number in 1897.

From the records of two large metropolitan hospitals I

have gleaned the following figures:—At St. Bartholomew's, from 1860, cases with the diagnosis of cerebro-spinal meningitis occur in the years 1872, 1888, 1889, 1890, 1892, 1893, 1895, 1896, 1897—twenty-one in all. In many years the word meningitis alone is used, in others the word spinal meningitis and meningitis simplex. Ormerod (*Lancet*, 1895, I.) gives an exceedingly interesting report on ten fatal cases from this Hospital: four of them occurred between March and June, 1890, at which time epidemic meningitis prevailed in the Eastern Counties. At St. Thomas's since 1873 cases with the diagnosis of cerebro-spinal meningitis occur in the years 1895 and 1896—seven cases in all. In the wards of the Royal Infirmary, Edinburgh, there were in 1891 three cases diagnosed as cerebro-spinal meningitis, in 1892 two cases, in 1893 one case.

In the United States and Canada the occurrence of sporadic cases of cerebro-spinal fever in the intervals between epidemics has long been recognised. In Montreal I performed *post mortems* on at least three cases of acute purulent cerebro-spinal meningitis not associated with pneumonia or endocarditis, and not following otitis media or injury. As illustrating the liability to error, I may mention a case in which the diagnosis of cerebro-spinal meningitis was made in malignant small-pox; in another instance, with the same diagnosis, the case was a very acute typhoid fever, fatal within a week. In Philadelphia I saw only three cases.

At the Boston City Hospital, from 1880 to 1896, there were thirty-nine cases diagnosed as cerebro-spinal meningitis with a mortality of 59 per cent. It is interesting to note that during the first five months of 1897, when the epidemic began, there were forty-two admissions, a larger number than in the previous seventeen years. That the disease lingers in a city indefinitely after an outbreak has been the common opinion of all students of the disease, and anyone who has had a large *post-mortem* experience has met with sporadic instances of extensive suppurative meningitis which he has not been able to regard as secondary to any existing condition. The Philadelphia records are interesting in this respect. As collected by Stillé from 1863 the figures illustrate very well the periods in which there were slight outbreaks; namely, 1864-65 and 1872-73. Pepper ("American Text-book of Medicine," vol. i.,

p. 163) completed the figures to 1892, and Dr. Abbott has sent me the figures up to date. They show from 1884 a progressive decline in the number of cases, which may in part have been due to more careful diagnosis. From this year, when there were 124 deaths, there was a gradual decline, and in 1891 there were only 23 deaths. From that year the figures as sent me by Dr. Abbott are as follows:—1892, 22 cases; 1893, 35 cases; 1894, 18 cases; 1895, 17 cases; 1896, 7 cases; 1897, 10 cases; 1898, 24 cases; 1899 (to and including April 31), 89 cases. Here again it is interesting to see how quickly the epidemic prevalence of the disease is manifest. During 1898 the disease was not recognised as prevalent in Philadelphia. During the present year a number of cases have occurred, and the deaths during the first four months have been 89.

In Baltimore the figures for the past six years are as follows:—1893, 59 cases; 1894, 26 cases; 1895, 27 cases; 1896, 32 cases; 1897, 22 cases; 1898, 70 cases; during this year the prevalence of the disease was recognised as occurring in a mild form through the city. During the first four months of the present year there has been an increase, and the deaths for this period have been 27.

Sporadic Cerebro-Spinal Fever at the Johns Hopkins Hospital.—In the spring of 1898 the first cases of the epidemic form were admitted to hospital, and in all eighteen cases have been under treatment. Prior to this date only four cases had been admitted which we regarded as sporadic forms of cerebro-spinal fever, three within a few days of each other in 1893, and one, a chronic case, in 1892, which has been reported.[1]

CASE I.—Patrick R. (Hospital No. 7253), aged 57, admitted May 1, 1893. The patient had been drinking heavily, and when admitted was delirious, mumbling and muttering to himself, and picking at the bed-clothes, and he resisted actively any attempt to examine him. His friends stated that he had been in this condition for about a week. His temperature on admission was 97·5°, pulse 68, respirations 16. He had no skin rash and no symptoms suggestive of meningitis, and we regarded the case as one of delirium tremens. As shown in the annexed chart (Chart VIII.), he had no fever until the 5th, four days after his admission. There was then a rapid rise to 105°; the respirations increased from 28 to 40; the pulse rose to 112. Throughout the 6th the temperature remained high, falling on the morning of

[1] *Johns Hopkins Hospital Bulletin*, 1892.

the 7th to 103°. The respirations rose to 48. He was a little cyanosed, could not be roused, and he died at 8 a.m. on the 7th.

The autopsy (No. 413) showed extensive yellowish purulent exudate over the hemispheres. There was a turbid exudate at the base and along the Sylvian fissures; the ventricles contained an excess of cloudy fluid. The cord was not examined. Cover slips showed

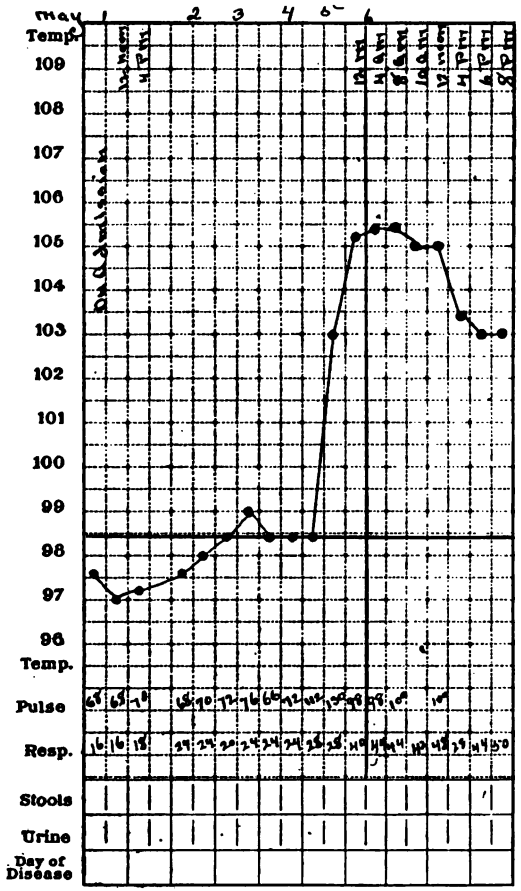

CHART VIII. P. R.

rounded cocci in pairs, chiefly in the mono- and polynuclear cells. Cultures showed diplo-bacilli. The lungs showed slight broncho-pneumonia, and the pneumococcus was isolated.

CASE 2.—Wm. F., aged 27 (Hospital No. 7282), admitted May 3, 1893. The patient was apparently very deaf, and was noisy and delirious when admitted, and he had no friends from whom any

history could be obtained. The temperature on admission was 99°, pulse 86, respirations 20. During the night he became very noisy and delirious, and the pulse was irregular. On the following morning examination of the thoracic and abdominal organs showed nothing of any special moment. The spleen was not palpable. The temperature was 99°, pulse 96, respirations 24. On the evening of the 4th

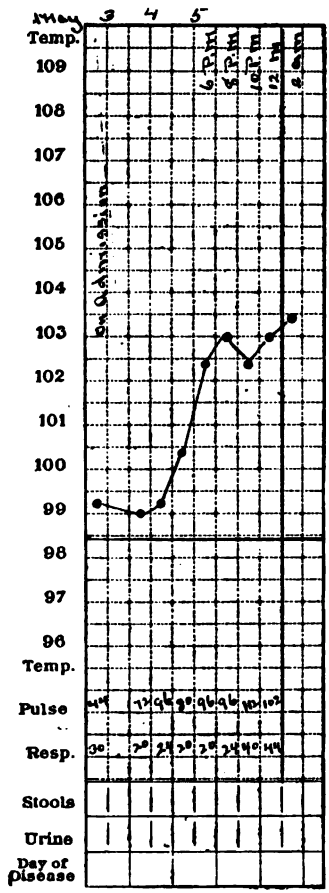

CHART IX. W. F. F.

and throughout the night the patient became very noisy and had to be transferred to the isolating ward. It was noticed on admission that he was very deaf, and this seemed to increase. On the afternoon of the 4th the temperature began to rise, and at 6 p.m. reached 102·5°. The pupils were equal; the pulse was 96, irregular. The patient resisted strongly any attempt to bend the head, and the neck was

held very rigid. There was general hyperæsthesia, and he cried out whenever he was touched. A petechial rash was noticed this afternoon for the first time over the abdomen. At 8 p.m. the temperature rose to 103° (Chart IX.). He became very much worse; the pulse became more rapid, 112, very irregular, and he died a little after 2 in the morning.

Autopsy (No. 412). A purulent greyish yellow exudate over the hemispheres, also along the pons and medulla, and the whole length of the spinal cord, which in the lumbar region reached a thickness of 8 mm. The ventricles were distended with a turbid yellowish fluid. In the posterior cornua there was a greenish exudate. Cover slips from the meninges showed numerous leucocytes and large cells containing round diplicocci. Pus from the ventricles showed many cocci, single and in pairs, chiefly in cells. Some of the larger cells were packed with these cocci. Cultures were negative. Inoculations of a rabbit and a mouse were also negative. At that time we had not recognised the diplococcus intracellularis of Weichselbaum, but the description of the organism, the position in such numbers within the cells, the failure to grow in cultures and the negative results of experiments on animals, make it more than probable that we were dealing with this organism.

When these cases occurred the disease was not prevailing in Baltimore, and except in New York it was not epidemic anywhere in the country, so far as we could ascertain. Three days after the death of Case 1 a lad was admitted with a most remarkable family history of the disease. The father, a very intelligent man, gave the following details of the cases:—

Wagner family.—I. A son, a young man of about 20 years, returned home on Monday, February 7, complaining of a terrible pain in his head. He had fever with much vomiting, and his head and neck were arched. He was very delirious, became rapidly worse, and died on Saturday the 12th. II. A sister, who had helped to nurse her brother, was taken ill on Monday the 15th with similar symptoms, and died in four days. III. A second sister became affected in a few days and for two weeks was desperately ill; she then began to improve and is now well. IV. The mother, who was worn out nursing the children, was taken ill on March 17 and died in two days. She had slept in the same bed with No. V., who was admitted to the hospital.

CASE 3.—W. W., aged 15, No. V. of the Wagner family, was admitted May 12, in the eighth week of an illness which the doctor described as cerebro-spinal meningitis, and of which his mother and a brother and sister had died. The patient presented a dull, heavy

appearance, and for some days did not appreciate his surroundings and appeared confused. He had delusions and hallucinations, and thought he saw his mother and sister in the room with him. He had no fever, and there was no rigidity of the head or neck. The optic nerves looked normal. He improved gradually and was discharged well June 10.

I can find no parallel to this record in the history of sporadic cerebro-spinal fever. The figures which I have given for Baltimore show that in the year 1893 a considerably larger number of cases occurred than in the four succeeding years, and the admission of these three cases in rapid succession excited our interest, but from this time until the spring of 1898 we saw nothing further of the disease. In the history of the epidemic form it is not very uncommon to find two or three cases from one house. Netter refers to Sewall's report of six children attacked in one family at the beginning of the New York epidemic in 1872, and he quotes from Thorne Thorne the statement of Morcieca that in Malta seven cases occurred in a family of nine persons. Such facts speak strongly for the contagious nature of the disease. Under ordinary circumstances, however, it is exceedingly rare to find more than one case in a family, either in the sporadic or epidemic form, and I know of no case in our recent American experience in which a physician or nurse has been attacked, or in which cases have developed among other patients in a hospital. We know nothing of the conditions under which the disease assumes this family malignancy, as it may be termed. In this respect it resembles pneumonia, not highly contagious as a rule, but which may at times, in a family or institution, present a high degree of malignancy.

Bacteriology of sporadic cerebro-spinal fever.—In a number of cases of sporadic cerebro-spinal meningitis the Weichselbaum organism has been found. The case reported by Stewart and Martin[1] is of peculiar interest, inasmuch as the epidemic form of the disease has not prevailed in Montreal for many years. It is to be noted, however, that the patient prior to her illness had been spending a few weeks in Boston, where the disease had been prevailing. An unusual point in this case was the occurrence of an acute purulent pericarditis in addition to the

[1] *Montreal Medical Journal*, March, 1898.

usual cerebro-spinal lesions. The cultures showed the diplococcus intracellularis.

By far the most suggestive contribution to this question made of late years is by Dr. George F. Still,[1] of the Great Ormond Street Hospital for Sick Children. In a study of the form of meningitis known as the simple posterior-basic of infants, he isolated from seven of eight cases a diplococcus which conforms in almost every particular with the diplococcus intracellularis. The frequency of this form of meningitis may be gathered from the fact that in ten years there were at this hospital forty-nine fatal cases, verified by autopsy. The smallest number in any one year was two, and the largest number seven. All of the cases were sporadic; none of them formed a part of any outbreak which could be considered epidemic. Clinically the disease presents certain differences from the ordinary type of cerebro-spinal fever, attacking young children, chiefly in the first year of life, and as a rule, is very much more chronic, though there are forms of cerebro-spinal fever which are quite as protracted. Skin rashes are rare, particularly herpes. The most interesting point of similarity determined by Still is the periarthritic affection in certain of the cases of posterior meningitis, involving, as in epidemic form, the capsule of the joint, and the sheaths of the tendons. He determined also in one case the presence of the diplococcus in the exudate.

The problem is one which deserves the closest attention, and in every case of sporadic meningitis a careful bacteriological examination should be made for the meningococcus and the pneumococcus, as we are still ignorant of the proportion of cases due severally to these organisms. Two points remain for discussion, viz., the incidence of acute non-tuberculous meningitis in hospital work, and the clinical varieties of the pneumococcic form.

Through the kind permission of my colleague, Professor Welch, one of his assistants, Dr. W. G. MacCallum, has analysed from the pathological department of the hospital the cases of meningitis in which bacteriological examinations have been made.

The twenty-five cases may be divided into four groups :—

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[1] *Journal of Pathology and Bacteriology*, vol. v., 1898.

(*a*) *Cerebro-spinal fever*—six cases (Nos. 412, 413, 1,104, 1,189, 1,314 and 1,362).

(*b*) *Pneumococcic meningitis*—eight cases (Nos. 384, 478, 619, 746, 989, 1,082, 1,151 and 1,362).

(*c*) *Pyogenic meningitis*, in which streptococci or staphylococci, singly or in association, were found—seven cases (Nos. 694, 1,065, 1,092, 1,247, 1,166, 1,363 and 1,364).

(*d*) *Miscellaneous*—four cases, two of which (Nos. 854 and 1,091) showed peculiar unidentified bacilli.

The pyogenic forms of meningitis do not concern us here; no case of primary streptococcus or staphylococcus meningitis came to autopsy. I have already referred to the chronic forms of cerebro-spinal fever in which the pyogenic cocci may alone be present at the time of death.

The meningitis with which the diplococcus lanceolatus is associated, in many respects the most important variety, deserves a separate consideration.

Pneumococcic Meningitis.

As the pneumococcus has long been recognised as the most important organism in the production of meningitis, the first question to be considered is how far sporadic cases of cerebro-spinal meningitis are due to it. Of the twenty-five cases of meningitis in the pathological department of the Johns Hopkins Hospital, in eight the pneumococcus was isolated from the exudate. Bacteriological statistics everywhere show the great importance of this organism as a factor in the causation of meningitis. Of twenty cases examined by Councilman, Mallory, and Wright there were ten cases in which the pneumococcus was found, eight of these secondary to other conditions, in two only primary. In eight cases of secondary meningitis the streptococcus was present. Netter's experience is particularly interesting. To April, 1897, he had examined bacteriologically sixty-one cases of meningitis, with the following results:—"Pneumococcus in pure culture thirty-five times, the same associated with the streptococcus and with the staphylococcus each one time, the streptococcus alone thirteen times, the diplococcus intracellularis meningitidis three times, the staphylococcus pyogenes aureus and the bacillus of Friedländer each two times, and the coli bacillus, the influenza

bacillus, a fine bacillus, and a pyocyanic and saprophytic bacillus each one time." We may recognise three groups of cases of pneumococcic meningitis.

I. *The meningitis is a complication of lobar pneumonia.* In Montreal my attention was called to the great frequency of this association, in eight of one hundred consecutive autopsies,[1] and since these observations I have had opportunities of studying a number of cases, though I have never met with so large a proportion. By far the most important contributions to the subject have been those of Nauwerck[2] and Netter.[3] Of the twenty-nine cases analysed by Nauwerck, in four the convexity of the brain was alone involved, in sixteen both cortex and base, and in seven the cortex, base, and spinal cord. Netter's study, the most complete that has yet appeared, contains an analysis of one hundred and twenty-four cases collected from the literature. In the recent monograph on pneumonia by Aufrecht[4] seven cases of meningitis were found in two hundred and fifty-three autopsies, and of one thousand five hundred and one cases of pneumonia in ten the diagnosis of meningitis was made, in three of which recovery followed. Of the eight cases of pneumococcus meningitis in the department of my colleague Welch, in only four was the condition associated with lobar pneumonia.

II. *Pneumococcic meningitis from local infection.*—In this exceedingly important group the infection may come from the nose or the adjacent sinuses, from the ears, or may follow an injury to the skull, or an operation. In two of the three cases in the series analysed by Dr. MacCallum there was fracture of the base of the skull. In the third, a child, aged six, had suppuration of the nasal mucous membrane and adjacent sinuses. In this connection the importance of the pneumococcus is universally recognised, and many cases are on record of infection from an otitis media.

III. *Primary pneumococcic meningitis.*—A number of observers

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[1] "The Morbid Anatomy of Pneumonia," *Canada Medical and Surgical Jour.*, May, 1885, and the Gulstonian Lectures on "Malignant Endocarditis," *British Medical Journal*, 1885, I.

[2] *Deutsches Archiv. für Klin. Med.*, *Bd.* xxix.

[3] *Archives Générales de Médecine*, 1887.

[4] Nothnagel's *Specielle Pathologie und Therapie*, Bd. xiv.

have isolated the pneumococcus in primary suppurative meningitis. The records cannot be regarded, however, as entirely trustworthy, since it is only within the past few years that bacteriologists have learned to recognise the differences between the pneumococcus and the diplococcus intracellularis. Subsequent study must determine in what proportion of cases of sporadic meningitis the pneumococcus exists, and in how many the diplococcus intracellularis.

The primary pneumococcic meningitis may develop in a person in good health, but more frequently there is a general pneumococcus infection in a debilitated individual, or in one with chronic disease. The meningitis may be present alone, or as is so common, in association with endocarditis. Of the cases examined in the *post-mortem* room of the Johns Hopkins hospital, one (No. 989), a man aged 44, had a general infection with the pneumococcus and meningitis. Another case (No. 1,206), with a general infection, acute endocarditis, and meningitis, is not included in this series, as a partial autopsy only was allowed, and but a small portion of the lumbar cord was examined.

Clinical features of pneumococcic meningitis.—I shall now refer to certain clinical features of these three groups of cases:—

(*a*) *Pneumonia with complicating meningitis.*—Is the case one of cerebro-spinal fever with pneumonia or of inflammation of the lungs with an added meningitis? This question does not often arise now at the bed-side, as it is most exceptional for the meningitis of pneumonia to present the symptoms of cerebro-spinal fever, and in a dubious case occurring during an epidemic the lumbar puncture (as in a case to be referred to in a few minutes) may be relied upon to clear up any doubts. The most valuable clinical record of meningitis in pneumonia is to be found in Nauwerck's paper. The histories, seventeen in number, are very full and complete, and in every case accompanied with a *post-mortem* report. He has added a series of twelve cases from the literature, making twenty-nine in all. All of the cases were above the twentieth year of age—a striking contrast to cerebro-spinal fever, in which a large proportion of all the cases are in the young. A second point is the latency of meningitis in pneumonia, which is much more often recognised in the dead house than in the wards. Netter states that fully one-half of the cases are of

this latent type. Of the cases I saw in Montreal I remember but one in which the diagnosis was made during life. Huguenin, referring to this obscurity, says: "We know no symptom which is constant in all cases or which may not be present in an identical manner in other conditions." Headache, early delirium, deepening into unconsciousness, are present in all cases. This is a consequence of the more common involvement of the cortex of the hemispheres. As Leichtenstern remarks, the mind may remain clear throughout the course of a case of cerebro-spinal fever. Spinal symptoms are rare; in only seven of the cases analysed by Nauwerck was there rigidity of the neck muscles. Strabismus was present in one-fifth of the cases, ptosis only once. The importance of lumbar puncture cannot be too strongly emphasised. A recent case, which occurred while cases of cerebro-spinal fever were in the hospital, illustrates this so well that I give an abstract of it:—

Charles E., aged 52 (Hospital No. 26417), was admitted May 6, 1899, with pneumonia of the right upper lobe of about eight days' duration. He was in a semi-comatose condition, with a temperature of only 99°, respirations 32, pulse 108. There was a pneumonia of the apex of the right lung. The day after admission it was noted that his arms and legs were very stiff; Kernig's sign was well marked, and there was some rigidity of the neck. The patient, however, responded to questions. Lumbar puncture was made in the third interspace, and 5 cc. of a perfectly clear limpid fluid obtained. Lumbar puncture was made again on May 10, and 30 cc. of a perfectly clear fluid obtained, negative on cover-slips and culture. For the next three days he had a good deal of tremor. Kernig's sign was present, and there was still some rigidity of the arms and of the neck. The leucocytes ranged from 16,000 to 24,000 per cmm. On the 14th lumbar puncture was performed for a third time, and a slightly turbid fluid obtained, from which on cover-slips the pneumococcus was obtained. The patient died on the evening of the 14th. The autopsy showed a pneumonia of the right apex, a very slight purulent exudate at the base, some turbid fluid in the ventricles, and a small amount of turbid cerebro-spinal fluid, but no positive exudate on the spinal meninges. There was an ulcerative endocarditis of the aortic valve. The pneumococcus was isolated from the meninges, the heart valves, and from the lung. A very interesting feature in this case was the normal temperature on the 11th, 12th and 13th days of the disease, and the high temperature on the 14th and 15th days, ranging to 105° and 106°.

And lastly, a most important difference between the meningitis complicating pneumonia and cerebro-spinal fever is the almost universally fatal course of the former. Nauwerck

describes the complication as invariably fatal, and he was not able to convince himself that in any one of the reported cases of recovery in the literature meningitis was actually present. Netter[1] speaks somewhat more hopefully, and states that recovery may occur. He gives two cases from the literature, both in children. In one, a child of five, in which the crisis occurred on the sixth day; the signs of meningitis were the presence during the first few days of headache, unequal pupils and ptosis. Aufrecht, in his recent monograph, *loc. cit.*, also speaks of the possibility of recovery. Of ten cases of meningitis in 1501 of pneumonia, three recovered. Netter, in his article in "the Twentieth Century Practice," commenting upon the statement by Wentworth that pneumococcal meningitis is always fatal, states that "as early as 1887 I demonstrated, however, that its curability is one of the most evident characteristics of the pneumococcal meningitis." So far as I can gather there is nothing in his essay to justify such a statement, since, as I have mentioned, he gives but two instances of recovery.

Personally I have never recognised recovery in pneumonia complicated with meningitis, and the literature of the subject bears out strongly the view that one of the most striking differences between the meningitis of pneumonia and cerebro-spinal fever is the almost invariably fatal termination of the former.

(*b*) *Pneumococcic meningitis from local infection.* — Two of the three cases in this group were surgical; one (No. 746), followed removal of the bones of nose and orbit; the other (1151) a fracture of the base of the skull, involving the cribriform plate of the ethmoid. In both the pneumoccus alone was isolated from the exudate in the cerebral meningitis. In two of Councilman's eight cases the infection followed fracture, in one otitis media. Cases of this group do not so often appear in the medical wards, but last year we were particularly interested in a case in which the infection started from the nose and accessory sinuses; though the possibility has to be considered of extension from the meninges. An abstract is worth quoting, and the picture (fig. 2) shows a remarkable condition of cervical opisthotonos:

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[1] *Archives Generales de Medicine*, 1887, I., p. 273.

Anna C., aged 6 (black), admitted March 31, 1898. Her previous history was negative. Five days before entrance, directly after supper, she vomited and complained of headache; later in the evening she became delirious. Two days after the head was held stiffly, and she had much pain in the back of the neck. She had fever, rapid pulse, loss of appetite, and constipation. On admission she was conscious, but very irritable and difficult to examine. The head was arched back and could not be brought forward. The pupils were equal and reacted to light. There was a marked slight internal strabismus. There was nothing of moment found in the examination of the chest and abdomen. She was very tender in the sub-occipital region, but there was no sign of disease of the cervical spine. Lumbar puncture on the 1st was negative. For the first week the condition remained about the same; the child could be roused, and answered

FIG. 2.—A. C. Pneumococcic meningitis—cervical opisthotonos.

questions, the strabismus persisted; there were no changes in the optic nerves. The temperature ranged from 100° to 104°. The arching of the head and neck continued; the eyes looked directly upwards (fig. 2). On the 17th a rash appeared, a diffuse erythema over the face, neck and chest, with papules. The rash faded in three days. The temperature ranged from 102° to 104°. On April 19 a profuse purulent discharge appeared from the nose, which showed the pneumococcus on cover-slips, but in cultures only the staphylococcus aureus grew. She could still be roused; the attitude remained as shown in the photograph. No optic neuritis. Throughout the 18th the temperature dropped from 105° to 97° on the morning of the 19th, and continued about 97° until her death on the morning of the 21st. One of the most remarkable features was the retention of consciousness to within a week of her death.

The autopsy (No. 1082) showed exudate over the sulci of the hemispheres. The base, from just behind the optic commissure, over the pons and lateral lobes of the cerebellum, was covered with a soft yellow exudate. The posterior surface of the spinal cord showed the same. The ventricles were much distended with a turbid fluid. There was suppuration of the mucous membrane of the nose, and of the ethmoidal and sphenoidal sinuses. Cultures showed the pneumococcus in the cerebro-spinal exudate, and from the nasal pus the pneumococcus and the staphylococcus aureus.

(*c*) *Primary pneumococcic meningitis.*—Future investigations will decide the proportion of cases of primary cerebro-spinal meningitis due to the pneumococcus and to the diplococcus intracellularis; and it will be an exceedingly interesting study to determine whether there are clinical differences such as separate so decidedly the meningitis complicating pneumonia from the cerebro-spinal fever. Judging from the bacteriological records given by Councilman, Mallory and Wright, and those of the Pathological Laboratory of the Johns Hopkins Hospital, the primary pneumococcic meningitis is rare in America—certainly much less infrequent than the secondary forms. Two of Councilman's ten cases, both infants, one of ten months, the other of six days, were primary. I cannot gather from Netter's statistics[1] how many of his cases were *primary;* nor without consulting the original can one say how many of the thirteen cases of sporadic meningitis studied by Malenchini (quoted by Netter) belonged to this group. Of our eight cases, as stated, only one was primary, and it is worth quoting :—

G. C., aged 44 (white), admitted at 6.30 p.m. on September 1, 1897, in an unconscious state. When seen by his brother on Saturday, the 29th, he was quite well. After going to bed on Saturday evening, the 30th, he had a severe chill. On Monday he was too ill to go to work. In the evening he became delirious, and ever since has had fever, has been restless, difficult to restrain, and very noisy. On admission the temperature was 105°; the pulse 136 and small. Dr. McCrae saw him a few minutes after he had been put to bed, and took very full and careful notes of the condition. The face was flushed and he looked distressed. There was no strabismus; the pupils were dilated and inactive. The head and neck were held stiffly, and the arms were held firmly flexed on the chest. There were no signs of pneumonia; the heart sounds were clear. The abdomen was not distended, there were no rose spots and the spleen could not be felt; there were no herpes. The skin had a diffuse mottling, but no purpuric spots were seen. There was no urethral discharge. The

[1] "Twentieth Century Practice," vol. xvi., p. 193.

leucocytes were 13,500 per cm., no alteration in a differential count of 500. The Widal reaction was not present. At 10 p.m. the temperature had reached 106° and he was given a bath at 80, with ice frictions, which reduced the rectal temperature to 103°. At 11 p.m the body seemed to be held much more stiffly. At 12 midnight he was much worse, and at 12.40 a.m. he died, about three days and three hours from the time of the initial chill.

The *post mortem* (No. 989) showed a diffuse purulent meningitis of the hemispheres ; the base much less involved and the ventricles not at all affected. The cord unfortunately was not examined. There was a recent diffuse nephritis, and the urine in the bladder contained albumen and tube cases. There was a general pneumococcus infection, no pneumonia or endocarditis, and the pneumococcus was separated in pure culture from the meningeal exudate.

V.—Note on the Treatment of Cerebro-Spinal Fever.

In our series of cases we have used no special drugs. Morphia has been freely given to control the pain. Ice sponging has been employed whenever the temperature reached above 102·5°. Our mortality, considering that the cases were as a rule quite severe, has been low, only eight of eighteen cases in the Hospital, and nine among the twenty-one cases which I have seen.

I have already spoken of the possible benefits in certain cases of the relief of pressure by the withdrawal of cerebro-spinal fluid.

In two of our cases the spinal canal has been opened, drained and irrigated. Winter (*Lancet*, 1891), in tuberculous meningitis, removed the spinal process of the second lumbar vertebra and drained the spinal canal. Von Ziemssen first attempted to use local therapeutics to the membranes of the cord by injecting a weak solution of iodine in a case of meningitis; and later Sahli practised permanent drainage through a canula and catheter. So far as I know, an extensive laminectomy had not been done for acute spinal meningitis until our first case, Nov. 6th, 1898, in which the operation was suggested and performed by Dr. Harvey W. Cushing, the first assistant in the surgical clinic of my colleague, Professor Halsted. The case has already been given in abstract under the section on Bacteriology[1] as the one in which the staphylococci only were present at the time of

[1] And reported in *Boston Medical and Surgical Journal*, December 29th, 1898.

operation. The spinal canal was thoroughly irrigated with salt solution and a quantity of purulent exudate washed out. No change followed in the existing paraplegia. The bladder and kidneys became infected, and he died about two months after the operation. The paraplegia persisted. At autopsy the spinal meninges were smooth and looked perfectly normal. It was impossible to say where the dura mater had been incised, and there were neither adhesions nor areas of the thickenning on the pia-arachnoid. There were extensive changes in the cord itself and in nerve roots.

In case 12 laminectomy was performed on the fourth day by Dr. Cushing. The patient was very ill, and the spinal symptoms were especially pronounced. A catheter was passed beneath the dura mater, and the membranes drained and irrigated with salt solution. For several days he seemed much better. He developed a hæmorrhagic cystitis and pyelonephritis, and died on the sixth day after operation.

Dr. Musser, of Philadelphia, has also had an unsuccessful case. Dr. Rolleston and Mr. Herbert Allingham have reported[1] a case of sporadic cerebro-spinal meningitis, in which the patient recovered after laminectomy and drainage. On the principle of a desperate remedy for a desperate disease, the operation (which has been criticised adversely in an editorial note in the *Philadelphia Medical Journal*) seems justifiable in certain severe cases, in which, as in our first case, the spinal symptoms are very marked.

RECENT ADVANCES IN THE TREATMENT OF TUBERCULOSIS.

By S. T. Pruen, M.D. (Cheltenham.)

Among tuberculous diseases there is one which stands out prominently as the variety that overshadows all others—pulmonary tuberculosis or phthisis.

Roughly speaking, of every eight deaths one is from tuberculous disease. Of every ten deaths one is from phthisis. In London in 1897 there died from all causes 81,000 people.

[1] *Lancet*, 1899.

Of these tuberculosis claimed 11,000, among which 8,000 were due to phthisis.

Now the tubercle bacillus flourishes in the tissues of the lower animals as well as in our own. The soil, however, in which it grows seems to alter very greatly the character of the bacillus; but however altered, if removed to its original soil it undoubtedly does sometimes regain its former characters. The bacillus, for instance, of birds and that of man are very far apart in appearance and characters. The bacillus of birds propagates but with great difficulty in man and most mammals, and though experimentally it is difficult to propagate it, yet there are cases which show that infection can be conveyed from birds to man and also from man to birds. But we can go even a step lower than birds. A woman who lived near Paris suffered from phthisis. Her expectoration and excreta were put into a pond. The fish in it died, and being examined *post mortem*, in every case tubercle was found in the liver and other viscera.

Again, from the cow to man the bacillus is easily transferred. The bacilli of man and cow are much alike in character and properties, and the opportunity being given, infection is often rapid and fairly sure.

Although most, if not all animals, may suffer from tuberculosis, they appear to differ greatly in their liability to the infection. Cattle are most easily infected, next come horses, then pigs, and lastly sheep and goats. But even this liability seems to depend less upon the nature of the animal than upon the life which it leads. Goats or sheep pampered and kept in close confinement develop phthisis; while cows kept by poor people, fed scantily or picking up what they can in the field, kept day and night in the open, or in sheds which though dirty and ill-kept, yet let in abundance of air, rarely, if ever, become tuberculous.

It is with cattle that we are most concerned; an occasional individual may develop tuberculosis by living with, or by using as food, a diseased bird or mammal; but thousands of children annually develop it from drinking the milk of tuberculous cows.

Now tuberculosis though infective, it is agreed by most authorities, is not hereditary; and yet heredity plays its part in the matter. The child of phthisical parents is more likely than another to develop tubercle; and why?

(1) It will probably be a weakly child and so less able to resist any disease that comes in its way, especially phthisis.

(2) It is born and brought up in a house certain to be infected with tubercle bacilli in most of the rooms.

(3) Many phthisical parents do not suckle their children. At first sight this would seem to be a safeguard; but the milk of a phthisical patient is safe, for unless the mammary gland be tuberculous the milk is not infected. Dr. Sidney Martin recently said that 9,000 cases of tuberculosis had passed under his notice, but that in not one had he seen undoubted tuberculous disease of the breast.

But if children are not suckled they are brought up on artificial food, and frequently on cow's milk. Now 50 per cent. of cows are tuberculous, and though not all tuberculous cows give infected milk, yet the habit of dairymen of mixing together the milk of many cows is so prevalent that milk from one cow may by admixture infect many cans of milk. Professor Delépine said lately, in a lecture delivered at the late Lord Vernon's Model Dairy at Sudbury, that he had tested 200 samples of milk from town and country by injecting portions into guinea pigs. The milk from town dairies (which *are* inspected) caused tuberculosis in 5½ per cent. of the samples used, while that from country dairies (which are *not* inspected) caused tuberculosis in 17½ per cent.

The amount of tuberculous disease among children is appalling, and it has been stationary or even increasing in very young children, while phthisis in older people has greatly diminished during the last sixty years from 38 per 10,000 to 14 per 10,000 living. It has been reduced nearly to one-third. But quite lately Dr. Rothschild, of Paris, by simply sterilising all milk taken, has succeeded in three years in reducing the infant mortality at a certain *crêche* from 13 per cent. to less than 3 per cent. And by giving sterilised milk no infant even suffered from diarrhœa, and consequently none from mesenteric tuberculosis.

In other words, take a hundred cases of acute continued diarrhœa in poor children under one year. What will happen? Thirty-one per cent. will recover any how, treated or untreated; 28 per cent. will die—no treatment will save them; 41 per cent. can be saved by using sterilised milk directly the attack commences; while none would even have contracted diar-

rhœa had they been brought up from birth on sterilised milk.

In considering the question of the beneficial effects of sterilised food, we are face to face with a somewhat complicated question in prophylaxis. Sterilising food destroys all the disease germs that are present and not only those of tubercle. Consequently the saving of life which results, though it may be largely, is certainly not entirely, and possibly not chiefly due to the destruction of the tubercle germs. Again, the mere fact of passing milk through a separator and remixing the resulting skim milk and cream, has a very great sterilising effect. The more solid foreign particles of the milk are hurled against the containing wall of the cylinder, and there collect into a thick fluid known technically as "mud." When witnessing the demonstration at the late Lord Vernon's farm at Sudbury last autumn, I saw the bacteriological cultures from milk before and after it had so passed through the separator, and Professor Sims Woodhead, who then saw them for the first time, remarked that he did not think that more than one per cent. of the germs had failed to be arrested by the treatment.

But though the enormous diminution in infant mortality with sterilised milk is not entirely due to the destruction of the tubercle bacillus, probably more than we think is. Tuberculous diarrhœa in its early stages is very difficult to diagnose, and Professor Delépine, who examined microscopically the mesenteric glands of children dying from diarrhœa, whom he and others felt sure, from the ordinary *post-mortem* examination, had not had tuberculous disease, found to his astonishment that tubercle bacilli were present in these glands in many of the cases.

Now while children are very liable to tuberculous mesenteric disease and tuberculous meningitis, adults of course are much more liable to pulmonary tuberculosis. The infection in phthisis is derived from tuberculous dust in the respired air, and the dust is nearly always infected from the presence of the dried sputum of pthisical patients (or even of phthisical animals) who have, as nearly all do at times, expectorated on the ground. Children, of course, must also breathe this dust, but the bacillus does not seem to flourish in their lungs; while, on the other hand, adults who drink tuberculous milk

are usually not affected with tubercle of the intestines. As then adults are infected chiefly through the air poisoned with dried sputum dust, and children chiefly through contaminated milk, it is obvious that if consumptives were forbidden to expectorate except into disinfecting receptacles, and animals with coughs killed or isolated, while the sale of tuberculous cows' milk was forbidden, we should practically cease to have tubercle in either young or old; at any rate, as the universally wide-spread scourge which it is.

Until the sputum can be so restricted it is wiser to see that the dust is not allowed to accumulate unnecessarily, and that what does unavoidably accumulate is exposed to the conditions most favourable to the destruction of the bacillus—fresh air and sunshine. One hour's exposure to sunshine will kill any tubercle bacillus.

The outlook then is hopeful, and we may reasonably look forward to the time when we shall have eliminated the causes of this disease. But at the present moment it is almost more important to turn our attention to the great army of sufferers who are already infected with the disease, and in so doing I shall confine my attention almost entirely to pulmonary tuberculosis.

In the first place, it is now generally admitted that the great majority of the patients who acquire phthisis are spontaneously cured. Pathologists assure us that from 25 per cent. to 35 per cent. of *post-mortem* examinations in cases of deaths from all causes show healed tuberculous lesions in the lungs, while the number of those who die from phthisis is only 10 per cent. of deaths from all causes. Therefore it is evident that in every four persons infected three will undergo a spontaneous cure. Probably all of the three, and certainly most of them, had the disease in a very light form, so light, indeed, in many cases, that it would have been impossible to diagnose it during its course, even had attention been directed to it. But while the three had the disease slightly and undergo spontaneous cure, the fourth has it more severely, and without treatment will in time die. It is to the treatment of this fourth patient (who numbers 150,000 to 200,000 in England and Wales) that I propose to direct attention, and in particular to the treatment which is so much to the front at present—the "open-air cure."

COTSWOLD SANATORIUM: EAST WING OF MAIN BLOCK.

What is meant by "the open-air cure?"

It has long been recognised that air is a most important consideration in the treatment; but air at great altitudes, very dry air, hot air and cold air, have all been held up as the *desideratum*. It is only during the last few years in Germany, and the last year or two in England, that we have gradually realised that neither height nor depth, nor temperature nor humidity has much to do with the question, that there is only one quality absolutely needful—freshness—that the air shall not have been respired before, or be laden with the dried products of disease.

But though fresh air is excellent treatment for the diseased conditions of the body caused by the inhalation of air sewage, it can hardly be called a remedy. It merely prevents the acting of more poison on the tissues, it does not repair the damage caused by that which has already attacked them. Happily in most cases the mere ceasing of fresh poisoning is sufficient, and the tissues regain their former condition, but not by virtue of fresh air.

The application of fresh air is preventive medicine. It is the cutting of the rope which is rapidly strangling the patient; this is practically what occurs in the open-air treatment of phthisis. In the very early stages of this disease (and sometimes in the case of strong men in the later stages), the mere replacement of foul dust-laden air by that which is pure stops the further irritation and re-infection of the lung, and is a change sufficient to enable the not too diseased tissues, no longer attacked by re-inforcements of their enemies, to concentrate their attention upon, and to successfully destroy, the bacilli which are poisoning them. The majority of such patients, however, are unable to combat the tubercle bacillus in this way, and their treatment by fresh air, though it removes the accessory and additional irritation, and so weakens the onslaught of the bacilli, yet only diminishes the virulence of their attack, and delays their inroads without actually stopping them. In dealing, therefore, with phthisis we are face to face with a disease which demands active treatment, and, although the very first essential in dealing with it is that all accessory impedimenta shall be removed, that fresh air, and nothing but fresh air, shall be breathed at all times, both day and night, and though no

assistance can possibly avail until this condition has been absolutely complied with, yet further steps are necessary to success, and the tissues which have to fight the already present bacillus must be nourished, and adequately nourished. How to do this is a question which may well engage our attention.

Although we cannot feed and build up the lungs directly, yet happily we can do so indirectly by improving the general condition of the body. This general condition can, as we all know, be improved by suitable food. But at the outset we are met by the apparent difficulty that it is no easy matter to feed phthisical patients. We shall see, I think, with care, that this is not the case, and that very excessive feeding is not only desirable but possible. The amount of food which practically answers in phthisis is greatly in excess of that which is theoretically required.

A somewhat similar anomaly occurs in the treatment of anæmia; the difference between anæmia and health appears to lie in the absence of a few grains of iron; yet in the treatment of this disease the best results are obtained by the administration of an amount of iron out of all proportion to that which is theoretically required. If in anæmia the theoretical amount of iron, or even ten times the theoretical amount, be administered, the result will often be that the disease will not be even appreciably checked. In the wasting from starvation, on the other hand, there is no such anomaly. I have often fed up patients who have been admitted to a workhouse suffering from it in minor degrees; and I have still more often fed up runaway or deserted slaves in Africa, reduced to the very last stage by want of food. It is easy to calculate approximately the amount of food which such a patient needs to make up for the loss by daily waste; and if to this a small quantity be added to balance his previous loss in weight, his daily gain will be steady and persistent. In wasting diseases these results cannot be so obtained; the amount of food necessary to counterbalance the daily waste, added to the amount which theoretically should gradually restore the weight, will not restore it. Indeed, the decrease in weight may continue uninterruptedly But an amount greatly in excess of what is apparently required will often restore the lost tissues if certain rules for exercise and rest

are strictly observed. This is the secret which has enabled some of the sanatoria abroad, but especially the one at Nordrach in the Black Forest, to obtain such striking successes in the treatment of phthisical patients. Weir Mitchell lays it down as an axiom, and those who have paid much attention to dietetics will agree with him, that, given a case of wasting disease, if you can increase the quantity of fat laid up, you always at the same time increase the quantity and quality of the blood and other tissues. Now it can be shown that in cases of phthisis, by the proper administration of the ordinary fats and albumens of every-day life, fat will be laid up, the other tissues built up and strengthened, and the tubercle bacillus destroyed.

The question of what kind of food is not a difficult matter, for the best food in phthisis, if not in most wasting diseases, is the plain, solid, well-cooked, ordinary diet of an Englishman, with the addition, though not necessarily, of an extra quantity of milk and cream. Nor is this diet contra-indicated even by high temperatures. If the food can be retained, it will do good, even during this condition; and it can be retained very much oftener and very much more easily than would have been thought possible by those who have not seen it given. It is quite practicable to feed phthisical patients in even the second and third stages, and with high temperatures, upon beef, mutton, ham, potatoes, and vegetables in large quantities, as well as upon lighter diet; and the results are astonishing. But to feed patients successfully upon such a diet it is necessary to understand the indications for it, and to observe certain precautions. It is necessary, in fact, to work by rules, and the best are those which are carried out rigidly at Nordrach, and which are beginning to be carried out in England.

Though Nordrach is the best, it was not the earliest sanatorium opened on the Continent, for Brehmer was the pioneer in the open-air movement at his Sanatorium of Gorbersdorf in Silesia in 1859; and Detweiller, a few years later, was the first one to improve upon Brehmer's principles, while Otto Walther, at Nordrach in the Black Forest, during the last eight years, has put these principles into practice to an extent not anticipated by the earlier investigators.

There is an earlier authority even than Brehmer, and he was an Englishman, Mr. Bodington, of Sutton Coldfield, near Birmingham, who invented the cure of phthisis by keeping patients in the open air, giving them regulated exercise, and overfeeding them. After several successful cases he published, in 1840, a small book on the subject (which I hold in my hand). One case in particular interested me, described on pages 25 to 30. It was that of a young girl who, in 1836, had cavities in both lungs, and who was considered in a hopeless condition by her medical attendants. Under the treatment she improved, and finally recovered. On page 30 Mr. Bodington says: "At this time, 1839 (three years later) she is in perfect health." To this I can add my testimony. I saw this patient yesterday, that is, sixty-three years later, and she is still free from phthisis. Unfortunately Mr. Bodington's treatment was so ridiculed by the medical authorities of the day, who called it the "beefsteak and porter cure," that other practitioners were afraid to take it up, and so the credit for the cure has gone to the Continent; and we have another of the many good things which are "made in Germany," but should have been "made in England."

Brehmer made his tuberculous patients (chiefly phthisical) spend much time in the open air, and gave them good food and regulated exercise, and laid stress upon altitude. Detweiller, the founder of Falkenstein Sanatorium, made them keep all day in the open air, sheltered from wind and rain, and sleep at night with their windows open. He attributed less importance to gentle regulated exercises, and much to the daily rubbing, shampooing or bathing of the skin, and to very good feeding, the patients being encouraged to eat as much as they could, and to partake of a good deal of meat, vegetables and milk, beef tea and soup being also used. Detweiller paid great attention to the construction of the Sanatorium, the rooms, so far as possible, being arranged so that dust should not collect in them, and being daily cleansed, not by sweeping but by rubbing with damp cloths; great care was taken that the sputum should never lie about, all patients being taught to expectorate into disinfecting spittoons in the house and grounds, and into small pocket flasks during their walks, and all their clothes were disinfected in steam disinfectors before being washed. The regulation of the milk supply has

only been adopted of late years, and so did not enter at first into Detweiller's system. Now the milk is either sterilised before use or the cows are tested with tuberculin before being used as milch cows. Forty to sixty minims of tuberculin are injected into the subcutaneous tissues of a cow, and the temperature taken. This is usually 101·5° F. (normal for a cow). Should the temperature not rise during the next fifteen hours above 103° F. the cow is not tuberculous; should it rise to 104° F. or over, it is tuberculous, and should it be between 103° and 104° the case is a doubtful one, the animal should be isolated and re-tested in a month.

Most of the sanatoria in Germany are large roomy buildings with washable walls and ceilings, without unnecessary projections for dust, and yet well ornamented, heated by means of hot-water pipes, and surrounded by balconies in which the patients can lounge by day, sheltered from wind and rain, though open to the air. The patients are well fed, though not obliged to over-eat. They have about six meals a day and the discipline is not severe. Smoking is not forbidden. The results of this treatment, taking all stages of the disease together, are that about 15 per cent. are cured, and another 20 per cent. nearly cured, before they leave the sanatorium, 35 per cent. in all.

The results, taking the first stage, are much more satisfactory, about 28 per cent. being cured, another 30 per cent. nearly cured, 58 per cent. in all. Taking the third stage, only 1 per cent. is cured and 2 per cent. are improved. "Improved" means that they often recover later with ordinary care. This description applies to Falkenstein, Hohenhonurf, Gorbersdorf and all the great German sanatoria, and I have given but a brief one, because I want to go rather more fully into that of Nordrach under Dr. Otto Walther.

I hope no one will think that—in advocating the Nordrach treatment as the best all-round treatment, I think it is the only cure, and that all other methods are valueless—I do not. In a disease in which—as in phthisis—75 per cent. of the cases are cured spontaneously with any, or even with no treatment, it is probable that many varieties of treatment are good, and will have good results; and in the face of such facts it would be absurd to say that *only* this or that method of treatment can cure phthisis; but I believe the Nordrach

treatment is the only one that will cure advanced phthisis, as a usual and not as an exceptional thing.

In the early part of last year my partner, Mr. Braine-Hartnell, and I visited the chief German sanatoria, and also went over the different houses in Great Britain temporarily utilised for the open-air cure—Bournemouth, Cromer, Dereham, near King's Lynn, and Edinburgh—and saw many of those who had written on the subject, and saw and examined patients who had returned after being cured.

I was much struck by the widespread belief, both among patients and also among those medical men who had visited there, of the distinct superiority over all others of the treatment obtaining at Nordrach; and I determined to visit this sanatorium if possible. I was informed that the doctor and proprietor of the establishment were not too partial to medical visitors, and that he usually replied to requests on a brief postcard, "No room here for visitors, nearest inn ten miles away." However, I gained permission to go, and found myself at 10 o'clock one morning at the sanatorium; a group of wooden *châlets* near the bottom, and on one side of a little wooded ravine in the mountains 1,400 feet above the sea. A large stream ran down the ravine and turned a water turbine which worked the laundry, the saw, and the boot-cleaning machines, made the ice and worked the electric light. The *châlets* were small; the rooms, varying from 800 to 1,500 cubic feet capacity, had walls and ceilings of varnished pine. The floors were covered with linoleum. There was a large common dining-room at the foot of the ravine. It was a separate building, connected with the kitchen, and built on the road side. There were no outdoor shelters or verandahs, the patients sitting in the open air, wet weather or dry. Plenty of chairs were scattered about, but very few easy ones and no lounges. The walks up the hillside were by easy zig-zags, and there were benches at every level. The bedrooms were convenient—each had a hot and cold-water basin, and also a hot and cold-water shower-bath. The furniture was scanty but sufficient, and each room was warmed by hot-water pipes. The windows were always kept open, except when the patients were dressing or undressing, and even then it was not allowed to keep them long shut. If they were shut too long, I was told, no remark would be made, but

when next the patient came in from his walk he would find that Dr. Walther had been up with a screw-driver, and that there were no windows. (I believe this rarely happened!) In winter the windows were allowed to be shut when the patient was out.

As a rule every patient whose temperature was below 100° F. at night (and the temperature was taken by each patient four times daily in the rectum) went out walking and came down to the common room to meals. With temperatures above 100·5° F. patients were kept in bed with the windows open, always open, whatever the weather.

I think I can give the best idea of the place by giving one day's *menu*. I went through everything myself just like the patients while I was there. Men and women were treated alike, except that women had about two-thirds as much food as men—all meals were at one table. Dr. Walther carved for everyone, and the servants helped butter, bread, vegetables, &c.—patients did not as a rule help themselves, and were not allowed to leave anything.

7 to 8.—*Rise*, shower bath, hot or cold; dress.

8 to 9.—*Breakfast*, tea or coffee. 4 large slices of raw ham. 2 ozs. of butter and white or black bread. During the meal ¾ pint of milk was sipped.

9 to 10.—Write or read, or lie about. It was not very easy to write or read if it happened to be pouring.

10 to 12.—Walk two miles, more or less according to condition (rate of one mile an hour), first mile gently up hill, return down. Don't talk going up hill.

12 to 1.—Lie down on bed, in room alone.

1 to 2.—*Dinner*. Baked fish 3 or 4 ozs. Butter sauce and *potatoes*. 5 thick slices hot roast beef, with plenty of potatoes and buttered French beans. Butter and bread. ½ lb. ice pudding. ¾ pint milk sipped during meal. Beer, or light red wine in small quantities, was allowed. Apples, pears, plums, and filberts, if preferred. Then tea or coffee.

2 to 3.—Do as you like. Smoke, &c.

3 to 6.—Short walk, carry your hammock into the woods, sling it up and lie in it.

6 to 7.—Rest on bed.

7 to 8.—*Supper*. 2 slices cold raw sausage and potatoes. ¼ lb. minced raw beef and potatoes. 2 ozs. butter, bread,

and biscuits. Tea and coffee. *No coughing allowed at meals.* If a patient cannot retain his food, he goes outside, and as the patients express it, "botanises in the garden." Then he returns and starts again. There is not much of this.

No soups are given at any meals.

8 to 9.—Do as you like in a quiet way. No cards or exciting games are allowed.

9 to 10.—Bed.

When the patient is steadily gaining weight milk is reduced. There were fifty patients under treatment, half of whom were English. I spoke to some of the ladies; they were women of refinement who evidently came from comfortable homes in England. They found it a very hard life; they occasionally got wet through to the skin, then sometimes sat in their wet clothes until they dried. They were not obliged to do this, but had not always opportunities of changing. They had never caught a cold there, they had never seen anyone else catch one. They expected to catch colds at first when beginning the new life, but they never did. A man told me he used to wake sometimes in the morning with two inches of snow on his bed during the winter. Another who was there when an excessive number were taken in, and he had to sleep in an unfinished room, with no heating apparatus in mid-winter. The temperature was always below 40° F., and though he sat in rooms with his feet in thick boots and wrapped up in blankets, yet he never had his feet warm for a whole month. None of them liked the treatment; but they all said, "You get well here when you come incurable from other sanatoria." Two of the patients were medical men—they gave the same account of the life as the others. They all agreed that after the first they rarely had indigestion, and that sickness was not common, though it was terrible work sometimes getting the heavy meals down. All agreed that the first effects of the open-air life was to reduce the temperature and to increase the appetite. I may mention that symptoms are treated as they arise, and drugs used when necessary.

The results of the treatment are not easy to obtain. Dr. Walther publishes no statistics—the patients gave different opinions; but none ranked the cures below 50 per cent. and some gave them as high as 90 per cent., and this notwith-

standing that they are taken in at Nordrach in later stages than in many other sanatoria. In fact, they come to Nordrach after they get worse at other places.

I heard of many striking cures. One was of a rather tall woman who came to Nordrach in what they thought was a dying condition; she had cavities in both lungs, was pale, anæmic, and cadaverous looking, and weighed only five stone. In ten months she was cured and went home weighing ten stone.

It seems almost certain that any place away from the smoke of towns, on a porous soil, and with a sheltered aspect, and sheltered walks, in any climate *not too warm*, is suitable for the open-air treatment of phthisis. If there are hill walks for exercise, so much the better. And as far as possible it is better to arrange sanatoria to take in patients from a distance, and not from the neighbouring towns, as rest and quietness, without unnecessary visits from friends and relations, conduces to much more satisfactory results than can otherwise be obtained.

Besides the sanatoria I have already mentioned, there are others just finished, or nearly ready, at Nordrach-on-Mendip, in Somersetshire, where Dr. Thurnam and Dr. Gwynn, who were themselves cured at Nordrach, have a small but successful institution; at Ringwood in the New Forest, where Dr. Mander Smythe, also a consumptive cured at Nordrach, and afterwards assistant to Dr. Walther, is opening one; at Mundelsley, in Norfolk, where Dr. Burton-Fanning, one of the pioneers of open-air treatment in this country, has built a place; and at the Cotteswold Sanatorium, near Cheltenham, where my partner, Mr. Braine-Hartnell, and I have started one. But this supply is totally inadequate to the demand. All these sanatoria put together cannot take in a hundred patients yet, and many thousands are wanting to come. There is room in Great Britain for a hundred such institutions for upper and middle-class patients, and many more for poorer ones.

The open-air treatment of phthisis is now well advanced, but the treatment of tuberculosis, other than phthisis, is hardly known to most.

While at Norwich, staying with Dr. Burton-Fanning, I went over the Norwich Hospital, and there saw the patients

with tuberculous disease of bones and joints lying out in the garden under improvised shelters.

It was very curious to see the cases of hip-disease with extensions applied, lying on their bedsteads, but instead of in a ward, on the grass beside the flower-beds. I was told that their temperature and general condition had strikingly improved since they were so treated; and the patients themselves said that they felt well and hungry since they had been out all day long. They felt like new creatures.

The application of the open-air treatment to tuberculosis, other than pulmonary, is thus still in its infancy, but what little has been done in this direction has been uniformly successful.

THE USE OF NITROUS OXIDE GAS IN GENERAL AND DENTAL SURGERY.

By H. J. Paterson, M.A., M.B., B.C., F.R.C.S.

Part I.—The Use of Gas in General Surgery.

The object of this paper is to plead for a more extended use of nitrous oxide anæsthesia in general surgery. To prevent misunderstanding, may I at once explain, that when I refer to the use of gas or nitrous oxide anæsthesia, I imply that the gas is given with suitable proportions of either air or oxygen.

The administration of nitrous oxide gas alone should be avoided, as under these circumstances its action is largely asphyxial, and if the administration be prolonged to fifty or sixty seconds in the absence of air, aspyhxial convulsions appear. These objectionable phenomena may be completely avoided by the concurrent administration of air or pure oxygen, and definite anæsthesia yet obtained. This has been very clearly brought out in an exhaustive paper recently read before the Royal Medico-Chirurgical Society, by Dr. Hewitt.

There are probably many present here to-night who have more or less frequently to administer gas, and probably to

most of you the question of the choice of an anæsthetic is one which causes anxious consideration, and it must be within the experience of all, that patients who look forward with dread to the simplest operative procedure, not through fear of the surgeon's knife, but of the vapours of the anæsthetic, will look forward to the operation with equanimity, if they can be assured that gas only will be necessary. I hope to show you that such a wish, when expressed, can in most cases be gratified. For these reasons, I trust that these fragmentary remarks may be not altogether devoid of interest to the members of this society. It is not my intention to weary you with statistics, but very briefly to set forth some of my own experiences and views on the use of gas as an anæsthetic.

The advantages of the use of gas for very short operations are generally recognised. It is comparatively safe, pleasant to take, and free from after effects. The great bar to its more extended use, is the fleeting character of the anæsthesia obtained, and the widespread belief that it is unsafe to continue its administration for more than a few minutes, on account of the strain thrown on the right side of the heart. I shall return to this point later on, but may remark in passing that such is the conservatism of our profession, that this belief as to danger of prolonging nitrous oxide-anæsthesia, holds sway even among many anæsthetists.

At the Annual Meeting of the British Medical Association in 1897, Dr. Kemp made the following statement:—"As the result of experiments it is strongly suggested that nitrous oxide combined with oxygen would be an appropriate anæsthetic for prolonged operations. A deep and smooth anæsthesia can be maintained for a sufficient length of time to warrant a wider trial in major surgery for long and severe operations. The gas is many times safer than either chloroform or ether, and after-vomiting is practically never present, if the ordinary precautions of feeding be observed."

These conclusions were based on experiments on animals. By giving gas and air, and later, gas and oxygen for gradually increasing periods, I found the results very satisfactory. I had thus clinically come to the same conclusions as Dr. Kemp. The longest case which I have as yet had opportunity of doing, lasted two hours and ten minutes, but I believe there is no reason why this anæsthetic should not be

administered for as long a period as any other. I must ask you to take my word as to the possibility of this, and proceed to discuss the expediency thereof.

To this end it will be convenient to consider whether the advantages already mentioned as obtaining in an ordinary administration of nitrous oxide gas, still hold good when the administration is prolonged. First and foremost is it safe?

For a long time it was believed that nitrous oxide owed its anæsthetic properties entirely to its asphyxiating action in cutting off the supply of oxygen to the tissues. Now that it has been clearly shown, that all obvious asphyxial symptoms may be prevented by the concurrent administration of oxygen, either pure, or as atmospheric air, it would appear at first sight that the gas has a specific anæsthetic action. Whatever be its precise action, I myself believe that there is an asphyxial element closely connected with it, and that this asphyxial element is due, not to deficiency of oxygen, but rather to excess of carbon dioxide in the blood. Recent work seems to show that excess of carbon dioxide in the blood is of greater import than deficiency of oxygen in causing asphyxia. On this view it is conceivable that gas, when given with sufficient oxygen to prevent outward asphyxial symptoms, prevents the elimination of carbon dioxide from the blood, and so acts as an anæsthetic by diminishing the oxidative processes of the tissues. In other words, by a process of internal asphyxia.

This, I admit, is pure theory, but it is to my mind supported by certain observed facts, which are difficult otherwise to explain.

(1) We cannot go on giving gas even when mixed with sufficient oxygen to maintain the blood of a good colour, without occasionally stopping the administration and allowing the patient free air. This looks as though a gradual accumulation of carbon dioxide were taking place, with consequent increasing internal asphyxia, so that it becomes necessary to afford the blood an opportunity of getting rid of this excess of carbon dioxide.

(2) Profuse sweating is of frequent occurrence in prolonged administration of gas and oxygen, for which three physiological explanations may be offered: shock, the bringing into play of the heat regulating mechanism, or asphyxia. The

first and second may be dismissed, as collapse rarely follows the administration of the gas *per se*, there is no rise of temperature, nor is vascular dilatation a necessary concomitant of this sweating. It is therefore probably another manifestation of internal asphyxia.

(3) Vomiting is not infrequent during long administrations. It has been shown that by passing venous blood through a loop of intestine it can be thrown into violent peristaltic action, and there is no reason why this should not be equally the result of excess of carbon dioxide as of deficiency of oxygen. This vomiting is probably another manifestation of internal asphyxia.

I have dwelt on this theory because, if true, it has an important bearing on the safety of administration, as I will endeavour to show further on.

Nitrous oxide may be injurious in two ways: (1) By action on respiration; (2) by acting on the heart.

If gas be given without air, or for some time without a sufficient proportion of air, asphyxial symptoms supervene, and finally respiration ceases. The colour of the patient warns us as to the approach of this condition, and even if respiration ceases, the gas is so rapidly eliminated that it is seldom necessary to do more (in an uncomplicated case) than open the mouth and draw the tongue forward. This danger is, I think, no greater in a long than in a short administration, and, further, it is one much less likely to occur than in short dental cases where the anæsthesia is pushed to a greater degree.

As regards the heart, it is said that prolonged nitrous oxide anæsthesia throws an undue strain on the right side of the heart. That this may be so if the patient be allowed to become greatly cyanosed, cannot be denied, but it is a danger which has in my opinion been greatly exaggerated. I have carefully investigated the condition of the heart in a considerable number of cases of prolonged anæsthesia, both under gas and air, and gas and oxygen, and in none of them was any evidence of dilatation of the heart detected; and this observation is corroborated by the fact that the pulse rate is as a rule little quickened, sometimes even slowed. Further, even if the heart did become dilated, the effect of the gas passes off so rapidly that no permanent evil would ensue.

Perhaps, however, one ought to make one reservation. It is quite possible that the above statement is true in ninety-nine cases out of a hundred, but that in the hundredth case a weakly acting or fatty heart might not be able to recover itself if the patient was allowed to become much cyanosed. This is, however, a contingency which can be avoided, even with gas and air, although much less likely to arise when giving the gas mixed with pure oxygen, as with this mixture it is far easier to prevent any cyanosis. On this account gas and oxygen must be considered safer than gas and air.

From these considerations it would appear that gas is a safe anæsthetic even for prolonged anæsthesia, provided asphyxial symptoms are prevented by the administration of a sufficient admixture of air or oxygen, preferably the latter. Further, if nitrous oxide owes its anæsthetic properties, not to any specific action, but rather its power of causing internal asphyxia, as suggested in the theory propounded earlier in this paper, asphyxia is the one danger to be avoided, and as the signs of this come on comparatively gradually, and are readily recognised, gas must necessarily be safer than either chloroform or ether for even prolonged operations. And indeed these conclusions seem to be borne out by clinical experience. So little, however, has been done as yet in this matter that it is not possible to speak dogmatically, and I can only express my own opinion, leaving you to judge what it is worth. I can, however, say, without hesitation, that out of a large number of continued administrations I have never had a moment's anxiety as to the condition of any of the patients. My early cases were with gas and air, the longest of the series lasting fifty minutes. In none of them, either during or after the administration, were there any untoward symptoms. Out of a large number of continued gas and oxygen administrations, the times ranging from fifteen minutes to two hours and ten minutes, two of the patients stopped breathing. One, a very feeble, alcoholic broken-down old man, in whom I tried to push the gas, unwisely diminishing the amount of oxygen, got jaw spasm, but on opening the mouth with a gag, breathing at once recommenced. The other patient was a woman in whose case I tried to stop some retching movements by pushing the gas. She also got jaw spasm, with cyanosis,

but, opening the mouth and hooking forward the tongue, respiration was at once restored. In both these cases you see I was violating the principles I have laid down above. May I add in this connection one word of advice, never give gas without having some form of mouth opener at hand.

Seven of the gas and oxygen administrations referred to lasted over one hour.

The next condition we have to inquire into is whether the gas is pleasant when taken for more than a few minutes. I judge of this from a considerable experience of its administration to nurses and students, and all were, without exception, highly pleased with the pleasantness of the inhalation and the rapidity of their recovery from its effects. One student, after an administration of over thirty-five minutes, had a full dinner within half an hour.

As to after effects. These are conspicuous by their absence. The patients not infrequently retch or vomit immediately on coming round; but this is seldom repeated, and I have never seen the vomiting persist after ten minutes. The patients are usually ready for some light food within half an hour. I have in a considerable number of the cases, and in all the longer ones, watched the patients for a day or two, but have never observed any after ill-effects—although one or two of the patients have complained of slight headache. But even this is unusual.

Collapse never, in my experience, follows the administration of gas *per se*, and in the longest case I have done there was absolutely no collapse at the end of the operation. In this case the notes, of which I hand round the administration, lasted two hours and ten minutes, and the patient had his tea within half an hour of his return to the ward. This is very different to what would have obtained had he had chloroform or ether for a corresponding length of time.

I will not detain you with a detailed account of methods, or of apparatus, further than to say that gas and air can be easily given with an ordinary gas apparatus, one breath of air being given to about three or four breaths of gas, the face-piece being held somewhat loosely over the face, so allowing some outer air to mix with the gas, or Mr. Carter Braine's air valve may be used on the face-piece supplemented with occasional breaths of air. For gas and oxygen I use a

slight modification of Dr. Hewitt's ingenious regulating apparatus. It is merely an arrangement to allow of increasing the proportion of oxygen, and also to permit of the administration of pure oxygen, without nitrous oxide gas.

All patients are not equally good subjects for gas. Heavy smokers occasionally, but more especially heavy drinkers, often struggle violently under gas; but even when this is so at first these patients often settle down after five or ten minutes and take the anæsthetic fairly well. In one or two cases this has been most striking. The patient has struggled so much that I have been on the point of substituting another anæsthetic when he has quieted down, and the rest of the anæsthesia has been maintained quite satisfactorily. In passing let me express a caution against changing from gas to chloroform—if for any reason a change should be necessary. At any time during a long administration a change to ether can readily be effected, but a change to chloroform is attended with much risk. I mention this because I had one or two narrow escapes before I became aware of this fact, and recently a death from this cause has been reported. I think it most unfair to attribute such a death to gas and oxygen. Two drugs may be very valuable when either is given alone, but incompatible when given together; but we do not discard either of them on that account. A seidlitz powder is an excellent family medicine, but it is inadvisable to take the contents of the two packets, one on the top of the other, in separate glasses of water.

Two factors possibly combine to make it dangerous to follow gas and oxygen immediately with chloroform. In the first place the inhalation of chloroform vapour immediately after gas may produce a rapid oscillatory change in blood pressure, a condition eminently tending towards syncope; and in the second place, the regular deep breathing which obtains under gas, renders the patient liable to inhale considerably more chloroform vapour than is realised.

As to the preparation of patients for taking gas, the precautions should be just as thorough as for any other anæsthetic, and I believe that, if anything, longer abstinence from solid food than usual, is advisable. Patients who have been lying quietly in bed for a day or two, take gas better than those who have been going about up to the time of the administration.

Women, as is well known, as a rule take gas better than men.

Let us now briefly consider the operations for which gas is a suitable anæsthetic. I have given gas and oxygen or gas and air for such operations as the following: operations for radical cure of hernia and hydrocele; Symes' amputation; amputations of legs and forearms; removal of lipomata, adenomata, carcinomata of the breast; removal of polypi and exostoses from external ear; exploration of sinuses; sequestrotomy; hæmorrhoids; fistulæ in ano, &c.—in one case, a girl aged 14, anæsthesia was maintained for fifty-five minutes while the mastoid antrum was trephined; skin-grafting; trephining long bones. In fact, there are few operations which cannot be performed under gas if desired, and there are many in which this anæsthetic is preferable to either chloroform or ether. I will briefly indicate some of these:—

(1) As a general rule, gas and oxygen should be given in most of the shorter operations of surgery lasting ten to twenty minutes, such as manipulating joints, pelvic examinations, curetting the uterus, opening and scraping abscesses, removal of lipomata, adenomata.

(2) Gas and oxygen is very valuable in cases of extensive cellulitis occurring in broken-down alcoholic subjects, for in these patients the risks of either chloroform or ether are often so much increased, that although, as pointed out above, such patients are especially prone to struggle, it is, I venture to think, worth while to put up with this inconvenience for the sake of the greater safety of the patient's life, especially as any struggling that may occur, gets less as the operation proceeds.

(3) I have in several cases had very good results from the employment of this anæsthetic in cases of empyema, it is less likely than chloroform to cause coughing, and there is probably less risk to the patient, as should the breathing become embarrassed, on discontinuing the administration, the gas is much more quickly eliminated than chloroform.

(4) In my experience patients with acute disease take this anæsthetic very well, for instance, pneumonia and malignant endocarditis. And indeed it is worth while to consider the possibility of giving gas and oxygen when the patient's

general condition is so bad that any other anæsthetic is inadmissible.

(5) Nowadays many operations are performed for the sake of personal adornment, operations of luxury we may call them. It is a great surgical calamity when a patient undergoing such an operation succumbs to the anæsthetic. Most of us have read of fatalities occurring in such, apparently trivial cases. I feel very strongly that in such cases, gas and oxygen, as the safest anæsthetic, should, if possible, be used.

One word as to certain limitations in the use of gas. At present its use is inadmissible in cœliotomy, owing to the difficulty of invariably preventing retching and vomiting. I hold very strongly that its use is also inadmissible in the operation for the removal of adenoids, notwithstanding that some authorities have advocated its use. I have come to this conclusion only after a careful trial, and that too, as one prejudiced in favour of the mixture, and anxious to believe it satisfactory for that operation. The time at the disposal of the operator after the removal of the face-piece, is so limited, that even with an expert operator there is scarcely sufficient time for a thorough operation. The breathing being deeper than with chloroform, there is more likelihood of blood being drawn into the air passages, and lastly, the child comes round so quickly that it finds its mouth not cleared of blood, and so is very needlessly and unnecessarily alarmed thereby.

As to the prolongation of nitrous oxide anæsthesia in very young children, my experience has not been very large. Such as I have had, has been satisfactory. The youngest child I have anæsthetised for any length of time was aged 1¾ years, anæsthesia being maintained for over fifteen minutes without any difficulty.

Before leaving this subject it is only fair to point out one or two disadvantages, some of which have been already alluded to. I believe in a good case an anæsthesia as profound as that of ether, but less profound than that of chloroform, is obtained, Still the fact remains that it is often difficult to reach this ideal, and altogether to prevent occasional reflex movements.

Vomiting, too, is occasionally a troublesome occurrence

during the progress of some cases, the more so as it cannot apparently be obviated by pushing the anæsthetic. I think there are two causes for this: (1) Irritation of pharynx and air passages by too cold gas; (2) Internal asphyxia.

The first cause can be readily removed by warming the gas after it leaves the bottle.

It is reasonable to hope that with greater knowledge and increased experience both these difficulties may be removed.

How far gas will supersede the use of chloroform and ether, must, in the present state of our knowledge, be a matter of conjecture, but I cannot myself help thinking that it will eventually largely supersede ether at any rate, and I hope I have said sufficient to-night to convince you that gas and oxygen deserves a wider trial than it has yet received in general surgery.

Part II.—The Prolongation of Nitrous Oxide Anæsthesia in Operations about the Mouth.

Admitted that it is feasible and safe to prolong nitrous oxide anæsthesia for ordinary surgical operations, the question naturally arises, Can we do so during the progress of operations about the mouth? The advantage of being able so to do must be at once apparent, more especially to dental surgeons. Various methods have been from time to time tried with this end in view. In my opinion the nose is a better channel for administering the gas to the patient than the mouth, for not only is the apparatus used more out of the way of the operator, but (and I think this a point of some importance) the majority of patients during normal gas anæsthesia seem to breathe through the nose in preference to the mouth.

The apparatus, which I have the pleasure of showing you to-night, consists of a small metal cover made to fit the nose accurately, with the aid of a rubber pad. The pad is detachable, so that the cover can be readily sterilised by boiling. Two small metal tubes are let into the nose-piece, and to these are attached two rubber tubes which lead to an ordinary gas bag, a two way stop-cock intervening. In using the apparatus, the nose-piece is placed *in situ*, the bag being filled with gas, and the stop-cock turned on. After the patient has

taken a few breaths of gas a celluloid cover is placed over the mouth. At the top of the mouth cover is an expiratory valve. The patient is now breathing gas through the nose only and expiring through the mouth. I may say that the use of this mouth cover is not absolutely necessary. Its function is two-fold. It diminishes the period of inhalation necessary for the production of anæsthesia, and consequently economises gas. In about thirty seconds the mouth cover is removed and the operation proceeded with. The patient is now taking in gas through the nose, and a limited amount of air through the mouth, and there is no difficulty in maintaining anæsthesia, indeed, the stop-cock has often to be turned off occasionally in order to allow the patient to obtain more air than is admitted by the mouth.

Results.—So far the results have been most encouraging, but as the method is to be demonstrated to-night, I had better not say too much on this point.

The longest period during which I have had the opportunity of maintaining anæsthesia by this means is nine minutes fifty-five seconds. This was at a public demonstration at Cambridge, on a man aged 35. The patient was kept absolutely quiet, and recovered after a very few minutes. During anæsthesia two teeth were prepared for crowning, and eighteen teeth extracted. On twenty-three occasions the anæsthesia has exceeded four minutes, but it must be mentioned that these times represent the actual duration of the operation, and not the total available anæsthesia, which would be twenty or thirty seconds longer, and which could have been further prolonged had the operation required it.

Disadvantages.—So far as I know there is only one disadvantage with this method, and that is, that owing to the anæsthetist being engaged in giving gas all through the operation, he is not so able to assist the operator as in giving gas in the ordinary way. It is, however, quite possible, although somewhat inconvenient, to manipulate the gag when required.

Advantages.—It may be said that this procedure is all very well for exceptional cases, but for ordinary cases gas mixed with air or oxygen is more suitable and simpler. I venture to hold a contrary view for three reasons. In the first place, it is not infrequently impossible to foresee whether any given extraction will be difficult or easy. With this method

of administration, inasmuch as anæsthesia can be kept up practically as long as is required, there is no limit to the time at the operator's disposal, consequently he need in no way hurry, but quietly proceed with the work he has to do. I think this is an advantage which every dental surgeon will readily appreciate. Secondly, while the administration is perhaps more difficult than the giving of gas in the ordinary way, it is certainly easier to manipulate than gas and oxygen. Thirdly and lastly, I venture to maintain that the ordinary method of dosing the patient with gas to the utmost limit, so as to maintain the anæsthesia as long as possible after the removal of the face-piece, is unscientific and wrong in principle. In this method the administration need not be pushed so far, the anæsthesia is carried only to the stage of unconsciousness, and the patient maintained gently under the influence of the gas without pushing it to an extreme degree. If I may be allowed to make an analogy, the ordinary method, compared with this method, is as if an express train were to start on its journey with an extra tender loaded with water instead of, as is the modern custom, taking up the water it requires while going on its way at full speed. So by this method the gas is given as required instead of giving an overdose at the commencement. By the use of this apparatus I hope that the administration of ether will become unnecessary in dental practice.

A NOTE ON SUTURE OF THE ABDOMINAL WALL IN OVARIOTOMY.

By J. A. Mansell Moullin, M.B.Ox., M.R.C.P.
Physician for Diseases of Women, West London Hospital.

There is no subject more frequently discussed among abdominal operators—and who is not one when a promising case presents itself?—than the mode of suture of the abdominal incision. From the very commencement of ovariotomy the subsequent behaviour of the abdominal wound has been the cause of anxiety, and the appearance of a ventral

hernia making its way through a weak cicatrix considerably counteracts the pleasure with which an otherwise successful operation may be regarded. How is this unfortunate accident to be avoided? It might be supposed that everything that can be said on this subject has been already exhausted; but in view of the multiplicity of opinions, I have no hesitation in offering the result of my own experience.

A true hernia of the scar occurs when the layers of fascia have not properly united. The bowel very soon discovers the deficiency, and when pressed back by the examining finger the hard and sharp margins of the ring are easily felt. A simple stretching of the cicatrix and the formation of a hernial-like protrusion is perhaps of more frequent occurrence, and, in most instances, is due to the same cause, imperfect union of the fascial layers.

Anything which prevents complete and primary union necessarily tends to the weakening of the scar and the production of hernia. Suppuration in the wound greatly affects the firmness of the cicatrix, and must be carefully guarded against by strict attention to asepsis. The use of drainage, whether by glass tube or gauze, necessarily leaves a weak spot, and the extra-peritoneal treatment of the stump favours it for the same reason. Putting aside all these obvious and unavoidable causes for a weak cicatrix, hernia may and does often make its way through a scar which has had none of these difficulties to contend against, and which has apparently healed perfectly by primary union.

The point under consideration is the attainment of primary union, combined with accurate adaptation of the various structures, more especially the fascial layers of the abdominal wall.

The materials available for sutures are silk, silkworm gut and cat-gut, and the structures of the wall may be sutured either *en masse* or separately in layers. This later method is the one which appears to be most in favour at the present time. It involves, however, the risk which always attends the use of buried sutures, and unless completely successful tends to promote the very danger which it is sought to obviate.

I have no liking for buried sutures, and cannot avoid a feeling, when I see the layers brought together with a

closely placed continuous suture, that the operator has mistaken his vocation, and fancies that the closer the stitches the firmer will be the union. This is a fallacy. It should not be forgotten that buried sutures are more or less temporary, the more so the better, and that if they persist they are just as likely to cause irritation as to remain quiescent.

When buried sutures are necessary catgut will be found by far the most satisfactory material. It will be easy to handle, can be rendered perfectly aseptic, and lasts sufficiently long to maintain the parts in apposition while the healing process is taking place, provided no strain be thrown upon it. Silkworm gut is unsuited for the purpose, the sharp bristle-like ends inevitably work through the skin. Silk is not to be trusted, however carefully sterilised; it is liable to become infected and cause an abscess.

For suturing the abdominal wall *en masse* we have in silkworm gut a material as nearly as possible perfect in every respect. It can be rendered thoroughly sterile, and the sutures may be allowed to remain for twelve or fourteen days, or longer, if required, without causing irritation. This is a great advantage, especially if the patient be troubled with a cough, or if there be much distension, as it affords time for a firmer healing of the wound.

The mode of inserting the sutures is one to which I wish to draw attention, and is a matter of the greatest importance. I use a strand of silk-worm gut threaded with one needle only, and carry it through first one side, commencing with the skin, and then through the other from within outward.

The suture should pass through all the structures. It is an important object to obtain the apposition of the largest possible amount of raw surface. The frequency of the sutures depends entirely on the thickness and firmness of the walls. Commencing with the skin I insert the point of the needle about one-third or one-half inch from the cut margin, and then retracting the skin pass it on obliquely through all the structures, including as much muscle as possible, and making sure that the fascia is included, for it is very liable to retract, bringing the point of the needle out almost at the margin of the peritoneum. The same precautions are observed on the opposite side, commencing from within at the peritoneal surface.

There are three things to be observed:—(1) The amount of peritoneum picked up is very small. This ensures that the cut edges of the peritoneum are brought together, and at the same time prevents the possibility of any redundant peritoneum being drawn up into, and folded over, the face of the wound. The sutures are hardly visible from inside the peritoneal cavity, not that this is a matter of consequence, but the edges are so closely adapted that any separate sewing of the peritoneum is superfluous; (2) the largest amount of cut surface is brought into apposition, and the fascia drawn well forward; (3) the sutures enter the skin just sufficiently far from the margin to allow of some adjustment of the latter, if necessary, after they have been tied. In this way the necessity for any intermediate superficial sutures is avoided. If the skin is very poor and flaccid it is liable to turn in, and consequently the sutures must be placed nearer the margin than they otherwise would be.

With the observance of these precautions in suturing the wound, I contend that closing the incision *en masse* is all that is required in the great majority of cases. There are, however, occasions on which buried sutures may be considered absolutely necessary. The incision may be a very long one; the walls may be so thin and shrivelled it is doubtful to what extent the raw surfaces meet, or on the other hand, covered by so many inches of fat, that no amount of tightening will secure a satisfactory apposition. In such cases I gather up the ends of all the sutures on either side, and while my assistant holds them on the stretch the whole of the raw surface is exposed to view. There is then no difficulty in seeing the fascia, which I unite with interrupted sutures of catgut, placed as closely as may be necessary. The silk-worm-gut sutures, previously inserted, are then brought together over them, and tied in the usual way.

Thus I maintain I have all the advantages of sewing up the wound in three layers with the minimum of risk. As before said, a separate suture for the peritoneum is superfluous; the margins brought together in this way become agglutinated in a very few hours. The fascia is held by a suture which maintains apposition sufficiently long to secure union and then dissolves, while the silk-worm gut sutures bear all the strain, and prevent the possibility of any bursting

open of the wound. The repair of an incision hernia is not a very satisfactory operation. If the hernia be of small size it is best to reopen the wound completely, remove the scar tissue and suture the fascia as in the original operation. Some operators do not open the peritoneal cavity, but stretch the margins of the wound over the hernia, which is pushed inwards. I can see no advantage to be gained by this precaution. When the hernia is of considerable size and the covering much thinned the chance of any operative measures meeting with success is very doubtful.

When necessary to re-open the abdomen the choice of position for the second incision must depend on the condition of the cicatrix. If this be perfectly sound, most certainly it is better to avoid it, and re-open at a point as far as convenient from it to prevent malnutrition of tissue. If the scar be thinned and yielding, it may be excised completely and the fascia united, in the hope—not a very good one—that a firmer cicatrix may result.

REBELLIOUS CONSTIPATION CURED BY MASSAGE OF THE GALL-BLADDER.—Berne (*Jour. des Practiciens*, No. 47, 1898), has found that in certain patients massage of the gall-bladder gives almost as good results in overcoming constipation as massage of the whole abdomen. In some patients massage of the whole abdomen is contra-indicated, as in the presence of an abdominal tumour, or an excess of adipose tissue, or a particularly sensitive skin, as well as in young women in whom the close association of the pelvic and abdominal organs make general abdominal massage undesirable. Moreover, constipation is often due to sluggishness of the biliary flow, and massage over the gall-bladder corrects this. The operator sits at the right side of his patient, and makes deep, gentle plunges with his fingers from below the false ribs upward toward the under surface of the liver. Ten minutes of this exercise, three hours after the midday meal, and repeated daily for ten or twelve days, will suffice to bring about a normal passage without the help of drugs. From thirty to forty days are required to effect a permanent cure. The passage of bile into the intestine is shown by the restoration of the normal colour of the stools, and the disappearance of their fœtid odour, while the body of the patient regains its natural embonpoint.—*New York Medical News.*

Report of Proceedings.

Ordinary Meeting—Friday, April 7, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

The Open-air Treatment of Tuberculosis.

Dr. S. T. PRUEN read a paper with the above title, which is published on page 188. The following discussion then followed.

Dr. WILLIAM T. GARDNER (Bournemouth): I can only agree with Dr. Pruen in all he has said with reference to the open-air treatment. I have been carrying out the open-air treatment of phthisical cases in Bournemouth for the last two winters, and the cases which have been under strict supervision in a sanatorium, or in charge of a nurse, have been very successful. This winter I persuaded some ladies who already had a home to go in for the open-air cure, and designed for them a Liegenhalle in which the patients could lie out all the day and be protected from the colder winds and wet weather. It has succeeded so well and been admired so much that I have had it photographed, hoping that it may be useful to any intending to build one for themselves, and I now pass you the photograph. My object was to build a light, airy and picturesque shed. The ground was dry and well drained, with large gravel stones in the one case, while in another shed which I built the ground was asphalted. The floor was built on rafters which raised it about four inches above the ground. The back was formed of match-boarding and also the sides about as high as an ordinary couch, so that patients lying out would have the air on a level with their heads when lying down. The sides were formed of three shutters made of a framework of wood and covered with Willesden paper. The roof was also made of Willesden paper. This forms a light and airy roof and is quite strong enough to resist all weather. The roof was brought well to the front, so as to form a sort of verandah, preventing the rain beating in, and at the same time sufficiently high to allow the sun to enter the shed.

The shed is capable of taking three or four patients. At the back of the shed is a long table at which the patients sit and have their meals. In the winter they had their breakfast in bed, but as they got stronger they liked to come down and have their breakfast out of doors. None of them have had

"LIEGENHALLE," A NEW DESIGN SUGGESTED BY DR. WILLIAM T. GARDNER. (REGISTERED.)

their meals in doors, but they have all had their meals out of doors in all weathers. They have remained out of doors until 8 p.m., having hanging lamps in the dark evenings, and after they have finished their evening meal they have gone straight to bed. Their meals usually take them about one to one and-a-half hours. The food is all weighed on a Salter's Improved Family Scale, having a dial face with a hand like a clock. I have found these scales very convenient, as you simply have to place the plate on the scale and the weight of food is recorded on the dial, and so all difficulty of weights is done away with. I am not satisfied unless the patients eat about seven pounds of food a day; this includes about three pounds of milk in weight.

The patients have lain out in the shed all day with the exception of the time when they are walking, which is regulated according to the amount of wasting and according to the temperature of the patient. My experience does not bear out the remark attributed by Dr. Theodore Williams to Dr. Walters, that the patients quarrelled and became lazy. The male patients are very glad to be allowed to walk, and I have not heard of any quarrelling. On the contrary, the patients have seemed very happy, have amused each other when they are well enough to be amused. I do not think it is advisable to allow patients with throat troubles, of course, to be put near other patients, but to be placed apart where they may be kept from talking.

Case 1.—R. J. G., male, aged 30, first had an attack of hæmoptysis in October 1891. From 1891 to 1892, he had five attacks of hæmoptysis; two of these were very severe, bringing up, he says, more than a pint of blood. In July, 1893, he had a small hæmorrhage, but was able to return to work in the following September. In May, 1895, he had another slight attack, but returned to work shortly after and remained at work till December, 1896, when he had to leave business for about ten weeks.

In September, 1898, he had another attack of hæmoptysis. During these years he was continually losing weight. In 1898, he lost 14 lbs., 7 lbs. of which was lost in September. During this month he was spitting blood daily. He has expectorated muco-pus freely for the last three years.

On October 18, 1898, he was placed under my care by Dr. Biss. He is the son of a doctor in the Midlands. His weight when I first saw him was 9 stone 3¾ lbs.

On March 1, he weighed 12 stone 9 lbs., showing a gain during five months of 3 stone 6 lbs. Dr. Biss wrote to me saying he had tuberculosis at the right apex, and that the lesion was softening. Anteriorly dulness extended to about

the second rib on the right side. Bronchial breathing and pectoriloquy were well marked, and mucous râles were loud and large in the supra-clavicular region. Crepitations were also heard in the first intercostal space. Posteriorly dulness was well marked in the supra-scapular region on the right side. Cavernous breathing and bronchophony with large moist sounds were heard in the inner portion of the supra-spinous fossa. The bronchial breathing and bronchophony were also heard near the spine over the rhomboid muscles.

On November 5, the sputum was sent to our local bacteriologist to be examined. He reported it to be opaque, tenacious and of a yellowish colour, with no blood stains, bacilli were present but not numerous. The temperature taken in the mouth was subnormal and remained so during the whole time he was in the sanatorium.

On February 8, 1899, nearly four months after his coming to Bournemouth, the bacteriologist reported that he could find no bacilli, the secretion was semi-transparent, only one or two muco-purulent pellets were expectorated. Early in the morning and the rest of the day he was absolutely free from cough. Six slides were examined and no bacilli could be found in any of the slides.

On March 3, 1899, he reported very few bacilli as being present. Six stools were again examined, but only two stools contained any bacilli; in these there were 8 and 3 bacilli respectively.

During this time the chest sounds improved immensely, the mucous râles became much fewer and could only be heard in the vomica at the right apex when he coughed. They were fewer and smaller in size.

On his leaving the sanatorium in March, 1899, the dulness had disappeared from the upper part of the anterior surface of the right chest, and also the bronchial breathing and moist sounds, with the exception of the supra-clavicular region, where the bronchial breathing and pectoriloquy were heard simply.

Posteriorly cavernous breathing was audible in the supra-spinous fossa, close to the vertebræ, and a few mucous râles, on coughing. The bronchial breathing remained also over the rhomboid muscles but was softer.

On March 4 he went to London and saw Dr. Biss, who wrote to me saying: "We can indeed be most delighted with Mr. G.'s progress. All the moist sounds have disappeared from the right lung, except a very few over the position of the vomica in the right supra-spinous fossa. I believe that the vomica is contracting, and I only hope it will contract entirely on itself. I agree with you that

Nordrach could hardly have done more for him. His case compares very favourably with some of the Nordrach show cases." No drugs were given at all. The digestion improved with the forced feeding. He ate on an average 7 lbs. of food a day, including 3 pints of milk. Exercise was regulated, being half an hour's slowly walking at first (about one mile an hour), later on he increased this to half an hour twice a day, and then two hours until he walked four or five hours at a stretch and did a little bicycling, going on one occasion to West Poole and back, a distance of about ten miles. His spirits became happier and brighter, and he said he had never felt so well in his life. His face was tanned with exposure to the air and he looked the picture of health. He walked without fatigue. His cough disappeared almost entirely, he had no night sweats. There was no excess of fat in any one spot, it was evenly distributed; his muscular system seemed to improve in tone and when stripped he looked like an athlete. I showed him to the Bournemouth Medical Society before he left. I might mention that his father, who was a medical man in the Midlands, is delighted with his improvement. I now pass round a photograph of him in his present condition, and one taken three years ago.

CASE 2.—G. M. M. R., aged 21, height 5 ft. 7 ins. His lung trouble dates from October, 1897, when his attention was first drawn to his condition by a sharp attack of hæmorrhage which occurred after some gymnastic exercises. In December, 1897, he went to Davos Platz and remained there six months until June, 1898. While there he had a slight hæmorrhage in the beginning of May. During these six months he gained ten pounds in weight. In June, 1898, on his return from Davos, he saw Dr. Sharkey, who pronounced the disease to be extensive. In the middle of July his cough started. In the beginning of August, 1898, he weighed 10 stone 8 lbs. He gradually lost weight until in the middle of October, 1898, he weighed only 9 stone 12 lbs. On November 4, 1898, he came to Bournemouth and I placed him in a sanatorium which I had recently persuaded some ladies to start. His weight on arrival was 10 stone. On April 3, 1899, he weighed 11 stone 10 lbs., making a gain of 24 lbs. in twenty-one weeks, which compared very favourably with the 10 lbs. gain while at Davos.

On examination I found that he had signs of a large and extensive cavity at the apex of the right lung. Loud cavernous breathing was audible in the inner portion of the supra-spinous fossa posteriorly, with large mucous râles, marking a vomica of some considerable size. Around and in

the neigbourhood of this vomica were fine crepitations extending over the greater part of the upper third of the right lung. There was also a considerable area of consolidated lung tissue along the side of the vertebræ on the right side of the chest. The left lung was normal. *Anteriorly* bronchial breathing was audible in the supra-clavicular region and in the first and second intercostal spaces. He was an intelligent man and a thorough enthusiast of the Nordrach treatment, and very anxious to try it.

His temperature, with the exception of the third and fourth weeks, when it was about 100° in the evening, was usually sub-normal. In the early part of his stay at Bournemouth he expectorated a considerable amount. The expectoration was examined by a bacteriologist on November 10, 1898, who reported: The secretion contains a lot of tubercle bacilli. I found a large number of the organisms in each of my preparations. On January 27 tubercle bacilli were present, fairly plentiful. Blood cells few, scattered corpuscles. Pus cells numerous. The secretion was opaque.

On March 9 a second specimen was sent, and the report was: Tubercle bacilli very few; blood cells, none; pus cells fairly plentiful; sputum opaque.

On March 24 no tubercle bacilli were present; no red corpuscles; pus cells microscopically fairly plentiful. The expectoration was of a thin, almost fluid character, with a few minute semi-transparent masses in suspension. His chest measurement increased during his stay by two inches.

On April 6, 1899, I found very few moist sounds. These were only audible, on coughing, in the cavity, which was marked by a hard cavernous breathing. The crepitation around the cavity had cleared up. The dulness and bronchial breathing had diminished above and below the cavity. I should have mentioned that on his arrival his voice was very husky, and on examination I found his vocal cords red and inflamed, and a capillary growth of a tuberculous nature in the inter-arytenoid space. This I painted with lactic acid 80 per cent., blew down iodoform powder, and ordered him to speak as little as possible. The throat greatly improved under this treatment and his voice quite cleared up.

Treatment.—No drugs were given with the exception of a little liver mixture now and then, owing to his becoming easily bilious. A generous diet was given, which was pushed as much as possible. His exercise was limited at the beginning to half-an-hour's slow walking, while during the greater part of the day he rested in an open kiosque on a couch. He was always out of doors from 9 a.m. to 8 p.m. He had his meals in the kiosque whatever the weather was. Later on

he was allowed to walk more but always very slowly. He never took an umbrella but did not court the rain, remaining under the shelter if it rained much. In appearance he looks thoroughly well, being full blooded, fat in the face, and cheerful in disposition. He does not complain of any shortness of breath. His cough has almost entirely disappeared, and he only expectorates one muco-purulent mass in the morning early. The cavity in his chest is evidently getting smaller and is always empty now. He now has a great dislike to go into a room, feels it close, even when the windows are open, and prefers to live always out of doors.

Dr. F. R. WALTERS: We are, I think, greatly indebted to Dr. Pruen and Dr. Gardner for their interesting papers. Dr. Pruen has so clearly described the methods of treatment that I need say very little about them. I would, however, like to emphasise two points. In the first place, it is, in my opinion, most important to choose a bracing place for the open air treatment. There is an impression in some quarters that any place will do: but I am sure this will lead to disappointment if acted upon. All the places with a reputation for the open air treatment—Davos and the other Alpine resorts, and the various German hill sanatoria among others—have a climate which is cool for at least part of the day. It would seem as if the ideal to be aimed at is, cool air to breathe, while we keep the patient warm in other ways; and I am certain that the best results will be obtained in the still curable cases by treating each one in a place which to him is bracing.

Another point of importance is to begin the treatment as soon as the disease has been discovered. It is a great mistake to temporise and to sacrifice early systematic treatment to considerations of mere convenience. We cannot replace badly damaged lung tissue, although under favourable conditions we can fairly expect to arrest the disease in early stages. Coming to my personal results in open air treatment: it is a little difficult to summarise these, inasmuch as some patients have been lost sight of, and others are still under treatment. It also seldom happens that we can treat such patients under conditions entirely satisfactory. With regard to the treatment of our poorer patients, twelve years' experience as an out-patient Physician to a Chest Hospital has convinced me that out-patient treatment of consumption is eminently unsatisfactory, as we cannot control the conditions of daily life. In-patient treatment is more useful; although it is a pity that so many of our chest hospitals are in situations which may possibly be conveniently near the centres of population, but are deprived of the advantages of pure air and other import-

ant climatic factors. Perhaps, in a more enlightened age, our chest hospitals will all be placed in pure country air, like the one at Ventnor. When the febrile stage of the disease is passed, the patients should, in my opinion, be drafted to a country sanatorium. England is particularly rich in convalescent homes, and many of these are willing to admit consumptives in an early stage, so that there are in this way from 7,000 to 8,000 beds available for such patients. A certain proportion of these homes could, in my opinion, be usefully converted into regular sanatoria with a resident medical officer and all necessary arrangements for continuing the open-air treatment. When patients leave these institutions they will need something of the nature of health colonies, in which they may earn their living under healthy conditions. There are many villages and small towns in this country which might usefully be devoted to this purpose. Our present health resorts are largely given up to middle and upper class patients, but new suburbs or neighbouring villages might well be transformed for the sake of convalescents from lung disease among the poor. I need not emphasise the great need of sanatoria for middle and upper class patients, as you must all of you be well aware of it. I have myself had great difficulty recently in finding places for some of my consumptive patients, who often cannot safely be left to take their chance in an ordinary health resort, or be properly treated at home. One of my patients wrote to Nordrach, but was informed that there would be no vacancy for four months; and he also failed to find accommodation in several of the existing British sanatoria. Among the cases which I can recall as having been recently treated by the open-air methods, I may mention a young married lady of 26, seen with Dr. Newby, of Croydon, with early unilateral affection of the chest after influenza and a history of hæmoptysis at the age of 15, who was treated in this way at Croydon and Hastings for six months with complete recovery of health. I had an opportunity of examining her again a month or two ago and found absolutely no evidence of any lung disease. Another case was that of a delicate-looking girl, aged 23, who apparently was about 16, who consulted me at the City Dispensary with unilateral lung trouble of eight or nine months' standing. At my advice she carried out open-air treatment at Forest Gate, and, notwithstanding the absence of trained nursing, showed an astonishing improvement within three months. She has had several relapses since then, but has more than maintained her ordinary health during four years. Another case was that of a young engineer, invalided home from Lagos, who was for a time under the care of

Dr. Wall, of Tulse Hill. There was a history of doubtful symptoms, dating back nearly two years, and of a more positive breakdown five months before I saw him. Notwithstanding the unsuitable neighbourhood, and amateur nursing, and the existence of somewhat extensive disease of both lungs, he greatly improved for nine months, but broke down after a change to Berwickshire where he was unfortunately somewhat neglected. Another case of early acute disease of one apex and slight affection of the other, in a man of 28, was successfully treated in a North Western suburb of London, first with quinine, digitalis, and opium, and then by open-air treatment. He has completely recovered. There were some other cases I had intended mentioning, but I will omit them. At the Hampstead Consumption Hospital open-air treatment has recently been introduced under difficulties for want of special conveniences, which latter, however, will be supplied before long. Although it is too soon to give detailed results, it is abundantly clear that the treatment reduces fever and improves appetite, weight, and sense of well-being to a far greater extent than was possible under the old ways of treatment.

The PRESIDENT: There are several points raised in this paper to which I would like to allude. In the first place I have always doubted the statement that the tubercle bacilli must be in a dry state in order to be infective. I think that there can be little doubt that the disease may be conveyed from one individual to another—thus from husband to wife—the bacilli being under these circumstances not in a condition of dryness. Then, again, I must confess that I am a firm believer in the view that there sometimes is a marked hereditary tendency to tuberculosis. In connection with the prevention of tuberculosis, I hold that it would be of the greatest value to have in this country State slaughter-houses similar to those abroad.

Dr. S. T. PRUEN: I congratulate Dr. Gardner very heartily on the success he has had with the cases which he has mentioned to us to-night. I am glad that Dr. Walters has pointed out the desirability of a bracing climate. I am sure that such a climate puts the patient in the most favourable condition for rapid recovery, although in early stages of the disease with the open-air treatment and feeding, some patients undoubtedly do recover in climates which are anything but bracing. As sanatoria multiply the need will be felt more and more of what Dr. Walters has aptly termed "Health Colonies," where patients who are sufficiently well on the road to recovery and no longer need the severe discipline of a sanatorium may spend some months of convalescence. With regard

to the President's belief that tuberculosis can be conveyed direct from one patient to another, and therefore by moist and not dry and pulverised infective material, the researches of Professor Flügge, of Birclau, are interesting. He has recently shown by a series of carefully worked out experiments that, if not the pure breath, yet certainly the minute droplets of fluid scattered in the air when a consumptive coughs are not only equally but far more infectious than the most carefully prepared direct sputum pulverised and so suspended in the air. I quite agree with the President that certain patients show a marked tendency to tuberculosis, but it is hereditary predisposition, not hereditary infection. Less than one calf per 1,000 is born diseased, but large numbers contract the disease in infancy if fed upon their mother's milk direct, but this does not occur if the mother's milk is first sterilised. This proves that, in the case of calves at least, direct infection, and not hereditary infection, is the thing to be feared. In conclusion, I offer you my thanks for the kind way in which you have received my remarks.

Ordinary Meeting.—Friday, May 5, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

The Use of Gas in General and Dental Surgery.

A paper under this title was read by Mr. H. T. Paterson, which is published on page 202.

The following discussion took place :—

Mr. LLOYD WILLIAMS : I have arranged for the attendance of two patients, upon each of whom I will operate while Mr. Paterson is demonstrating his method of producing anæsthesia. The first case is that of a married woman aged 33, in whom I shall have to remove a partially devitalised dental pulp from a left mandibular second biscuspid. I tested the pulp this morning and found it too sensitive to admit of removal. Inasmuch as the cavity is distal and therefore not easy to work in under the most favourable circumstances, and the removal of even a partially devitalised nerve is a very painful procedure, the case will test (*a*) the quietness of the anæsthesia, and (*b*) the sensibility of the patient while under the anæsthetic. The second case is a young girl, aged 17, suffering from dyspepsia and slight anæmia. In her there are large cavities exposing the pulps in the maxillary left second biscuspid and first molar; both pulps are living and have been causing acute toothache for some days. The

exposure of the pulp in this case is extremely small, and I therefore propose (1) to enlarge the pulp cavity fully, and (2) to remove the living pulp from the nerve canal. Both operations, which you will now see me perform, are perhaps among the most exquisitely painful known in surgical art. The second bicuspid has usually only one pulp canal; the first molar, on the other hand, has three roots, and therefore three pulp canals, necessitating that each pulp shall be separately removed.

[The patients were successfully anæsthetised and the operations performed before the members present, with a perfectly successful result. In the case of the second patient, however, vomiting occurred shortly afterwards.]

Mr. SWINFORD EDWARDS: I would like to know what the expense of anæsthesia, by means of gas and air and gas and oxygen, is. From what I have seen this evening, it does not appear to me that by this method one can rely on obtaining muscular relaxation—a very necessary condition in many operations, especially abdominal. However, I feel sure that Mr. Paterson's method has its uses, especially in dental surgery, and I congratulate him on this advance in anæsthesia.

Dr. DRUMMOND ROBINSON: Mr. Paterson has stated in his paper that prolonged anæsthesia, by means of gas and air or gas and oxygen, answers well for small operations on the uterus—such as curettage—and for pelvic examinations. With reference to this the same point occurred to me as has been already mentioned by Mr. Swinford Edwards. In curettage of the uterus so long as the patient remains fairly still it is a matter of small consequence whether the muscles are fully relaxed or not. On the other hand, in order to make a satisfactory bi-manual examination it is all-important that the abdominal muscles should be absolutely relaxed. Is it possible to obtain this degree of relaxation during anæsthesia by gas and air or gas and oxygen? In the second of Mr. Paterson's cases I noticed particularly that considerable muscular rigidity was present at the time when the patient was most deeply anæsthetised. Some time ago an old woman came to the out-patient department of this hospital complaining of offensive blood-stained vaginal discharge and much pruritus vulvæ. The vagina was occupied by a hard body, which it was found impossible to remove without the aid of an anæsthetic. Dr. Shuter gave the patient gas and air after the method advocated by Mr. Paterson, and I was with some difficulty enabled to remove an enormous cork bung from the vagina. This had been inserted some time previously for the relief of prolapsed uteri. Although this patient was unconscious for some minutes, her muscles were never thoroughly

relaxed. I should say, therefore, that unless gas and air anæsthesia can be made to produce greater muscular relaxation than in the cases I have seen, it is entirely unsuited for cases of pelvic examination. I have no experience of gas and oxygen, and I should be glad to know what effect this form of anæsthesia has on muscular rigidity, especially the rigidity of the abdominal walls.

Mr. JOHN STARLING: I doubt very much whether there was as much rigidity in the cases demonstrated upon as some previous speakers think.

Mr. KEETLEY: Any form of anæsthesia from which the patient can rapidly recover without after-sickness and the usual miserable feelings, will be especially useful in cases where the surgeon foresees the necessity of operating more than once on the same patient. A patient will sometimes say "I am willing to take ether (or chloroform) if this will be the last time," and the surgeon knows that this will not be the last time.

Mr. RICKARD W. LLOYD: I regret that I was unable to be present until just before Mr. Paterson demonstrated his nasal method of administration of nitrous oxide gas upon the two patients. Criticising those cases only—not the method, for one would not be justified in doing that fully without first having used it a number of times—I observed that the first patient was fifty seconds inhaling gas only, the gas being then continued through the nasal piece, ten seconds elapsing before Mr. Lloyd Williams commenced to operate, that he continued his operation for fifty seconds, that during the last twenty seconds of that time the patient was obviously coming round from the anæsthesia, notwithstanding the continuance of the nasal administration of the gas. There was an absence of apparent rigidity during the first thirty seconds after anæsthesia was induced. The second patient inhaled gas only for forty seconds. Then Mr. Lloyd Williams commenced to operate, and in less than a minute of time when the arm was raised it did not fall suddenly when released. When the operation had been continued two minutes there was retching, and in ten seconds more, up to which time nasal administration was continued, there was actual vomiting. (The patient subsequently stated that she took a biscuit, a small piece of cake and a cup of tea just four hours before the administration.) She was rigid all through the operation, there was some cyanosis and pallor of the lips. Sickness is generally comparatively rare in gas cases, and these two particular illustrations did not strike me as favourable ones in support of the method as against the ordinary method of administering gas.

Mr. McAdam Eccles: As I was responsible during the demonstration for the movements of the left arm, perhaps I should clearly state that in the first case there was complete relaxation of the muscles, but in the second case there was never any real loss of rigidity. This is of course a serious disadvantage for pelvic operations if it be a common occurrence under this method of anæsthesia.

Dr. Chapman: I should like to know which of the two methods the patients prefer, gas alone or gas and air. My children much prefer the mixture, and I should be interested to know what is usually the case.

Mr. Bellamy Gardner: I think it should be made pretty clear that a distinct difference exists in the use of gas and oxygen for surgical cases where the face-piece can be kept applied to the face throughout the operation, and Mr. Paterson's method of supplying gas under pressure through the patient's nose while the mouth is wide open and air freely admissible during a dental operation, as in these cases demonstrated by him so successfully to-night. I think Mr. Paterson is to be greatly congratulated on his adaptation of Mr. A. Coleman's idea of prolonging nitrous oxide anæsthesia in dental work, because it is always a difficult matter to keep a patient nicely anæsthetised in mouth operations even with chloroform, owing to the access of such large proportions of air with the anæsthetic. This has always been the primary obstacle in using nitrous oxide gas for such a purpose, because anæsthesia does not result when more than 30 per cent. of air is mixed with it. This difficulty is overcome by Mr. Paterson in supplying a stream of gas in such quantity that the respiratory passages are kept nearly filled with nitrous oxide, and, though some is lost, only a moderate amount of air gains entrance, and anæsthesia is attained. With regard to gas and oxygen for surgical operations other than those upon the mouth and nose, I gave an account of three and a-half years of my work upon the subject at the Society of Anæsthetists on March 27, 1899, and I arrived at the following conclusions:

(1) The anæsthesia is a very satisfactory one, though hardly so profound as that of ether and chloroform. (2) It is especially suitable for use when a patient has just previously had an operation or is going to have an operation under the major anæsthetics, as it does not often produce any after effects. (3) Its best results can be obtained with great attention to detail in posture and preparation of the patient for operations not lasting more than 20 minutes. (4) It is unsuitable for prolonged inhalation in children under 10 years of age.

Mr. LLOYD WILLIAMS: This is the first occasion in which I have seen this method of prolonging gas anæsthesia resorted to, and from a dentist's point of view it is very important that when attempting such delicate procedures as removal of pulps that the patient be maintained in a condition of absolute quietness, and that there should be no necessity for hurrying the work. With pure gas anæsthesia the patient is never quite still, and the need of hurry is urgent. While, however, the admixture of air or oxygen during nitrous oxide gas anæsthetisation overcomes the former objection, it does not at the same time dispose of the second. On the other hand, Mr. Paterson's demonstration upon my two cases showed that a quiet state of anæsthesia was produced, and that apparently the anæsthetic state could be indefinitely prolonged. With reference to the vomiting of the patient in the second case, general experience teaches that vomiting after pure gas anæsthesia is almost unknown; while vomiting not infrequently follows the administration of nitrous oxide and oxygen, and occasionally it follows the administration of nitrous oxide and air.

Mr. PATERSON: With regard to Mr. Swinford Edwards' query as to the cost of administering gas and oxygen, it must, of course, be admitted that it is expensive. Roughly speaking an administration of half-an-hour's duration costs about 5s. 6d., or if given for longer, about 10s. 6d. per hour. Several speakers have touched on the subject of the rigidity of patients under gas, and one speaker has called attention to the rigidity of the second patient anæsthetised to-night. There has been some confusion in the minds of some of the speakers as to the two methods, and I wish here to emphasise, what I apparently have not made quite clear, that I have been dealing with two totally distinct procedures; one the giving of gas and air, or gas and oxygen, for ordinary surgical operations, while the gas is given in the ordinary way through a face-piece covering the nose and mouth; the other the giving of gas through the nose with the mouth open, while operatory procedures are being performed in that region. In the first method it is quite possible to avoid rigidity, especially if oxygen be used. In the second, giving gas through the nose, the quantity of air is also easily regulated, and so rigidity is not so easy to avoid, but I may say at once that this is not of the slightest importance. Rigidity is no hindrance to an operation in the mouth. What is required is that the patient should be quite anæsthetic, rigidity being a condition of quite secondary importance. In reply to Dr. Robinson, therefore, I will say that it is quite possible to get the patient quite relaxed for a pelvic examination by means of gas and

air, although it is much easier to do so by means of gas and oxygen. As regards Mr. Lloyd's remarks: He has also called attention to the rigidity of the second patient; as I have already said I consider this, in a dental case, of no importance. The first case was absolutely relaxed all through the operation. I do not agree that vomiting after gas only occurs in 1 in 500 cases, as Mr. Lloyd has stated, and my experience is that vomiting occurs in 2 per cent. of all dental cases. Further, the second patient vomited some solid food, and if Mr. Lloyd had been present during my paper he would have noted that I said patients before having prolonged administration of gas ought to be starved for rather longer than before other anæsthetics. Mr. Lloyd, in criticising the first case, said that "the total anæsthesia lasted only 60 secs., and that during the last 20 secs. the patient was obviously coming round." I did not time the duration myself, and can only say that the official time, as taken by our senior Hon. Sec., was returned as 2 mins. 10 secs. The statement that during the last 20 secs. the "patient was obviously coming round," is quite inaccurate. I can readily understand Mr. Lloyd's making such a mistake, inasmuch as I was keeping the patient so lightly under, that, judging the case by the usual standard of full dental anæsthesia, she would, to one inexperienced in this method, appear to be coming round. But such was not the case, as I had her under complete control, and could have maintained the anæsthesia for a very much longer time had it been necessary. In my paper I urged this as one of the advantages of this method: that inasmuch as the gas was given continuously during the operation, the patient needed a smaller dose at first, a lighter anæsthesia being thus obtained and kept up during the progress of the operation. As regards Mr. Lloyd's criticism that the anæsthesia in the first case was not longer than could be obtained by an ordinary administration of gas, I can only say that Dr. Hewitt gives the average duration of anæsthesia for an ordinary gas administration as 33 secs., whereas this case lasted, according to Mr. Lloyd's own figures, 60 secs., and according to the official figures, 2 mins., 10 secs. As regards the second case, I did not notice the pallor of the lips to which Mr. Lloyd alluded, although I was watching the lips closely all the time. The vomiting was unfortunate, but was clearly due to the patient having too recently partaken of solid food. In conclusion, I must thank the members of this Society for their courteous attention to my paper, and Mr. Lloyd Williams for his kind co-operation in giving a demonstration on this subject.

Clinical Meeting.—Friday, June 2, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

A Case of Nævo-Lipoma of the Forearm.

Mr. McADAM ECCLES: I think that this case of nævo-lipoma of the forearm is one of very great interest, for it exhibits in a distinct manner the extreme which sometimes occurs in this aberration of blood vessels. The boy has had the nævoid condition since birth, but it has steadily increased in size. He presents two other nævi, one on the back over the left scapula, and the other over the buttock. The multiplicity of the nævi shows, I think, that the patient has some inherent tendency to these vascular growths. On examination of the forearm, it will be seen that there is a very prominent growth on the posterior and radial aspect of this portion of the limb. It is irregular on the surface and when compressed, the blood in the huge venous spaces and vessels can be squeezed out, but they very quickly refill when the compressing force is removed. It is somewhat difficult to be sure of the actual condition of the vessels in the deeper parts of the limb. With regard to the question of treatment, these cases vary much in difficulty with respect to the position in which they occur. Here it is on a limb, which must make any procedure fairly easy. There are two possible courses open in this case, one to render the limb bloodless and explore the growth, and if feasible to dissect it out wholly. On the other hand, if its enucleation cannot be carried out, then an amputation may be required. This also might become necessary even after a successful removal of the growth, owing to the extensive operative manipulation required, leading to atrophy of the hand and its subsequent uselessness.

Mr. W. B. ROTHEROE: I should like to know in what way Mr. Eccles proposes to remove this tumour.

Dr. DOBSON: Is the tumour getting larger?

The PRESIDENT: Does Mr. Eccles think that this growth extends between the radius and ulna. It seems to me to do so. If it does it would, I imagine, be an exceedingly difficult operation to remove it entirely, without amputating. Is it a nævo-lipoma or a nævo-fibroma?

Mr. E. PERCY PATON: From the point of view of treatment, the most satisfactory feature of this nævoid growth is its position on a limb; so that I think it is a very good case in which to try excision of the mass, after rendering the limb bloodless and applying a tourniquet. I think, however, in its present condition, it would be a mistake to go so far in

the attempted excision as to possibly damage the arm to such an extent as to run the risk of making a subsequent amputation necessary, for no artificial limb would ever be as useful to the boy as even his present damaged limb. I have recently seen a similar venous growth treated by excision with a very considerable measure of success, in a situation where the bleeding could only be controlled in the course of the operation, namely over the eyebrow. Complete removal, however, was found impracticable, owing to an extension of the swelling into the orbit.

Mr. KEETLEY: One of the first operations I ever performed in this hospital, was the amputation of the leg of a young man for a very similar condition to this. I do not see why in this case the tumour should not be excised.

Mr. NEVILLE WOOD: I was not aware that lipomata occurred specially in fat subjects. I have seen many lipomata in thin persons.

Mr. MCADAM ECCLES: I think with the President that the nævoid growth may possibly have passed between the bones of the forearm, but it is impossible, I think, to be sure of this until the growth is exposed. I agree with Mr. Neville Wood that many persons suffering from lipomata are other than obese.

A Case of Gastric Ulcer Treated by Excision.

Dr. DOBSON: The patient present here to-night suffered from symptoms of gastric ulcer and was under my care, and treated carefully in the ordinary way for over twelve months. Despite the treatment, however, she had repeated hæmorrhage, the last of which was nearly fatal. She was promptly removed to the West London Hospital, and for twelve weeks kept under the care of a physician, and subsequently for four weeks in a Convalescent Home. The result, however, was not good, and on resuming her work as a domestic servant, she soon again complained of pain and hæmatemesis. As the girl had no home or friends, I considered the only course left open was operation. Mr. Keetley very kindly undertook the operation, and the result has been a brilliant success. She is free from pain, can take any food, and I have no doubt that she is now completely cured. The question that arises in my mind is—is this an operation we should seriously propose to our patients suffering from chronic gastric ulcer? In this case, as you will hear, the operation was a very severe one. The patient was on the table two hours and a-half; moreover, it was at least three-quarters of an hour before Mr. Keetley succeeded in finding the ulcer, and I confess I should not have blamed him had he closed the

wound and thrown a doubt on the diagnosis. Fortunately, the ulcer was found and excised, and the result has been very good. We all meet with a large number of these cases of chronic gastric ulcer, but even with the experience of this case I must confess that I should hesitate for a considerable time before proposing the operation again, and should await the result of at least twelve months of the ordinary treatment by rest and careful diet. I should much like to hear the views of the meeting on this question.

Mr. KEETLEY: The ulcer was circular, sharped-edged and had completely perforated-adhesions preventing extravasation. It was in the posterior wall near the lesser curvature and the œsophageal end. It was difficult to find because it could only be reached after prolonged traction on the posterior wall of the stomach. I did not excise it, but scraped it freely, after separating the adhesions. Three silk-worm gut sutures were passed through the whole thickness of the stomach and tied with the knots inside the stomach, the exploratory opening made in the anterior wall being used for the purpose. Seven or eight Czerny-Lembert sutures were afterwards inserted. Only hot water and Apollinaris water were given by the mouth for a fortnight. The patient has been free from pain since the operation and now takes and digests her food well. The only difficulties in the operation were connected with the position of the ulcer and were not such as would add to the dangers of the operation. In a similar case I should not hesitate to repeat it.

Mr. BIDWELL: I think that we ought to congratulate Mr. Keetley on the success of his operation, more especially since excision of a gastric ulcer is an operation which has a very high mortality; in fact, of 21 cases which I have collected 12 died. With regard to the question of the necessity of performing operation in gastric ulcer I should like to refer you to Van Lute's statistics. This physician has recorded 1,000 cases of gastric ulcer treated by medical means alone. Out of these 1,000 cases, 750 were cured and 40 died, the remainder did not derive any benefit from treatment. We may therefore consider that some operative treatment may be necessary in one fourth of the cases of gastric ulcer. Now, the principal indications for operation are:

(1) Perforation.

(2) Repeated small hæmorrhages; not one severe one, since it is well known to all of you that patients often recover completely after such loss of blood.

(3) Resistance to ordinary treatment or inability, through the business, to carry out the treatment.

(4) Dilatation of the stomach, especially if a tumour be felt.

The next question is, which is the best operation to perform in the three latter cases? As I mentioned before, excision of the ulcer is an operation with a very high mortality and continental surgeons have in consequence discarded it and substituted the operation of gastro-enterectomy. This operation gives relief by correcting any dilatation of the stomach; it can easily be understood that if the stomach be distended the face of the ulcer will be stretched and so healing would be difficult; but after a gastro-enterectomy the dilatation will be cured and the ulcer will be at rest and will heal. It is quite simple to comprehend that a gastric ulcer in the neighbourhood of the pylorus will cause spasm of the pylorus and consequent dilatation, but it is more difficult to understand how an ulcer in another part of the stomach produces dilatation. The explanation is as follows; it is well known that the amount of free hydrochloric acid in the stomach is enormously increased in cases of gastric ulcer, and this hyperacidity causes spasms of the pylorus. The operation of gastro-enterostomy is all that is needed in most cases, but in cases of hæmorrhage it may also be necessary to pass a firm strong suture round the edge of the ulcer and tighten this, or the ulcer may be cauterised.

With regard to Mr. Keetley's difficulty in finding the ulcer, I may mention that I have records of two cases in which an operation was undertaken for the relief of hæmorrhage and no ulcer found after opening the stomach, but that the bleeding recurred, and the patients died, when a small superficial ulcer was found in each case at the *post mortem*. It is suggested that the ulcer may be found by inverting successive portions of the stomach with the finger through the incision in its wall.

I should like to say one word about feeding; personally I always commence feeding by the mouth early, and I have never had any cause to regret it. In a recent case of pyloroplasty for constriction of the pylorus after gastric ulcer, I commenced feeding with beef-tea and Valentine's juice on the day after the operation, and now, a fortnight after the operation, the patient is on a couch and is having fish, etc. Mr. Keetley mentions that his patient had Apollinaris water; I think that ærated waters should be avoided, since they delay passage of fluid out of the stomach. I feel sure that early feeding not only shortens the period of convalescence, but is much preferable from the patient's point of view.

Mr. Neville Wood: I should like to know what condition the patient is now in, and what sort of food she is taking.

Mr. E. Percy Paton: One of the most important points, I think, to note in operations on ulcers of the stomach, is the great difficulty, if not the impossibility, in many cases of

being at all certain as to the location of the ulcer without opening the organ. I have seen two cases in which, for gastric hæmorrhage, a suture was tied round a supposed gastric ulcer without opening the viscus, and in one of these at the *post mortem*, there was an ulcer present which had not been touched, and, though at the seat of the suture there was some breach of surface of the mucous membrane, it seemed doubtful if this were not due rather to the application of the suture than to any preceding ulceration. Cases in which the operation of excision of a gastric ulcer has been done as a set operation are certainly rare; but I have seen one case in which this was done after perforation. The patient did well for several days and seemed on the high road to recovery, but suddenly got worse and died at the end of about a week. At the autopsy no cause of death could be found, the stomach wound was satisfactorily closed and the peritoneum normal throughout, as were all the other organs. With all deference to Mr. Keetley, I cannot agree with him as to the comparative safety of prolonged interference in the abdomen provided *technique* is satisfactory, as I have seen several cases in which merely a prolonged exploration of the abdominal contents was made without any further operative interference, and yet the patient died within a day or two, and at the *post mortem* no cause of death could be found in any of the organs or in the peritoneum.

Dr. Dobson: In reply to Mr. Neville Wood, it is not six weeks since the operation was performed. The patient is up, she is taking a fairly generous diet of eggs, buttered toast, soup, tea, and bread and butter. The chief point, however, is that she is quite free from her severe pain. She is gaining flesh rapidly, and expresses herself as free from all symptoms whatever.

Mr. Keetley: To quote cases in which death has followed on the one hand slight surgical interference with the abdomen, and on the other handling the whole intestinal tract, has no bearing on my statement that prolonged and even, in a sense, rough handling of a limited portion is not in itself dangerous. It is a matter of common observation that operations involving the separation of extensive and tough adhesions by tearing, as well as cutting, are followed by no bad symptoms if extravasation, chilling and sepsis are guarded against. If the surgeon's patience and carefulness get exhausted in the face of difficulty, it is another matter. Are the majority of the cases of ulcer of the stomach which we imagine we have cured by diet really cured? Do not many relapse and endure for years, leaving serious after-consequences? I should not be disposed when I had put my finger on an ulcer

near the œsophageal end of the stomach to be content with a gastro-enterectomy. I do not see how that operation could be useful except when the ulcer was near the pylorus. I have not had time to examine the literature of this subject myself, but Dr. James Allen, after a prolonged search at the College of Surgeons Library, with the aid of the librarian, could find no case really similar to this.

A Case of Tuberculous Peritonitis.

Mr. L. A. Bidwell: This little girl, aged 6, was brought to the hospital on May 2 with diffuse suppurative peritonitis, which was pointing near the umbilicus. Three weeks previously she had been admitted into the Fever Hospital, Seagrove Road, as a case of enteric fever, and was kept there till she was transferred to the West London. The child was emaciated, with a rapid pulse and temperature of 101° F. The abdomen was distended, and there was a marked thrill and dulness in both loins; there was redness, with marked fluctuation, near the umbilicus. The child was immediately put under chloroform, and the abdomen opened in the middle line between the umbilicus and pubis. About two quarts of thick creamy pus was evacuated, and a quantity of jelly-like material was found in Douglas' pouch. The cavity was freely irrigated with normal saline solution and a silk-rubber drainage, with an inch drain placed in Douglas' pouch. The coils of intestine were covered with lymph and studded with tubercle in places. There was a considerable amount of discharge for the first few days, but the temperature immediately became normal, and remained so; the discharge practically ceased after ten days, and the wound was completely healed within three weeks. The child has gained flesh, and is able now to walk about. The finding of tubercles on the intestine in this case enabled one to give a good prognosis despite the quantity of pus in the peritoneal cavity.

A Case of Carcinoma of the Rectum.

Mr. L. A. Bidwell: This patient, aged 51, suffered from hæmorrhoids for about six years, but for three months before admission he had frequent hæmorrhage after defæcation, together with prolapse. He has also had some obstruction of the bowels, alternating with diarrhœa. There was a growth in the rectum occupying nearly the whole circumference of the bowel, its lower edge being about two inches above the anus and its upper could just be reached by the

finger. It was not fixed to the bladder or to the sacrum. Under ether an incision was made round the anus and prolonged to the top of the coccyx. The bowel was then freed beyond the growth and was cut away after clamping. In doing this a considerable amount of peritoneum was removed, and the rent was stitched up with silk sutures; about four inches of the rectum were removed. In order to unite the skin to the mucous membrane two incisions were made on each side of the former anus about one inch and a-half apart, and the flaps so formed dissected up; the edge of each flap was then united by silkworm gut sutures to the end of the rectum, and the rest of the wound plugged with gauze. The sutures on the right side held perfectly, but one or two of them on the left cut out, so a part has had to heal by granulation. The wound is now, however, practically healed. The operation was performed five weeks ago. This method of attaching the skin to the mucous membrane shortens the period of convalescence by some months. I have used this method in making a permanent supra-pubic opening into the bladder, and in two cases of permanent tracheotomy I have stitched flaps of the skin to the mucous membrane of the trachea.

CAVENDISH LECTURE.

June 16, 1899.

TOWN HALL, HAMMERSMITH, W.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

Dr. WILLIAM OSLER, M.D., LL.D., F.R.S., F.R.C.P., Professor of Medicine, Johns Hopkins University, Baltimore, delivered the Cavendish Lecture, choosing for his subject, "Cerebro-spinal Fever." The lecture will be found *in extenso* on page 145.

The Vote of Thanks.

Dr. BALL: Mr. President, I beg to propose a vote of thanks to Professor Osler for the great honour that he has conferred upon the West London Medico-Chirurgical Society in consenting to deliver the Cavendish lecture this year. We have listened to many distinguished lecturers in past years, but it has been a very special privilege to listen to-night to one who, though so distinguished as Professor Osler, and so well known to us all by repute, has been personally unknown

to most of us until this evening. He is indeed well known in this country by his fame as a physician, by his admirable work on the "Principles and Practice of Medicine," and by numerous and valuable contributions to medical literature. His contributions have indeed been very numerous, but more remarkable than their number is the diversity of the subjects dealt with. He has, in fact, done original work, and advanced our knowledge in nearly every department of general medicine. With regard to the lecture to which we have just listened, I feel that I could not attempt to deal with it in an adequate manner. Few of us, in this country, have had any practical experience of cerebro-spinal fever. Nevertheless the disease is one of the highest interest to every physician on account of the great variety and striking character of its symptoms, and of its relations with, and resemblances to, other infectious diseases. It has therefore been with great pleasure and profit that we have had the privilege of listening to one who has had a large experience of the disease, and who is at the same time so able and scientific an observer as Professor Osler. The *Proceedings* of this Society will have been much enriched by the possession of so valuable a contribution to the literature of this disease. The Society is deeply indebted to Professor Osler, and I need hardly say how cordially we welcome him here to-night. We welcome him as a physician of world-wide reputation, as one who, whether in Montreal where he began his labours, or in Philadelphia where he worked for some years, or in Baltimore where he now carries on his work, has always occupied the very foremost rank as a physician, and has always maintained the dignity and prestige of our profession. Of English parentage, Professor Osler is, I understand, Canadian born, and therefore we welcome him as a Canadian, as a son of our Colonial Empire, distinguished among its many distinguished sons. For the last fifteen years he has been closely identified with the medical profession in the United States of America, and therefore we welcome him here to-night as the representative, as the leader, indeed, of our medical brethren in that country; a country the people of which is so closely allied to our own people, in race and character, in traditions and sympathies. I feel confident, Mr. President, that the vote of thanks we are about to pass will be no mere formal vote, but that it will be a sincere vote of thanks, coming from the hearts of all present here to-night, hearty, and heart-felt.

Dr. Symons Eccles: It may seem to you, sir, and gentlemen, almost an impertinence on my part to add anything to the words which have fallen from Dr. Ball, in

seconding this vote of thanks to Dr. Osler. But while, no doubt, we all know his text-book on medicine, and the experimental work which has won recognition from his peers on both sides of the Atlantic, I doubt if we all know William Osler as the clinician, as the man who has added to our store of knowledge on chorea, abdominal tumours, angina pectoris, and even more widely divided subjects. But we do know him to-night as the Cavendish Lecturer on cerebro-spinal fever. Now whence this diversity of talents which has certainly not been buried? Well, sir, in the equation of life I think that environment has played a strong *rôle* in the life history of the most remarkable Cavendish Lecturer that we have had. A student in Montreal, and in London, a physician in Philadelphia, and a professor in the greatest post-graduate school in the world, a Fellow of the Royal Society of England, is it any wonder that Professor Osler should have developed the gifts which have been given him to such high purpose as he has shown throughout his career; and yet, mark you, the author of the text-book on medicine which is more widely read than any other, opens his book with an aphorism from the Father of Medicine, which if modesty were not so well known as an attribute of greatness, one might almost have dared to call Hippocratic instead of Hippocratian. "Experience is fallacious and judgment difficult"—that is Osler's translation of Hippocrates. Gentlemen, in asking you to accord by acclamation your thanks, I will make another quotation—this time from a Western Longfellow:—

> "Let us do our work as well,
> Both the unseen and the seen
> Make the house where God may dwell,
> Beautiful, entire and clean."

The PRESIDENT: The vote of thanks to Professor Osler having been carried by acclamation, it is now my pleasing duty to welcome him as an honorary member of our Society, his election as such having taken place at our last meeting.

Professor OSLER: Mr. President and gentlemen, I thank you for the kind words that you have said of me. Whatever I may have been enabled to do in my life, has been accomplished by hard and persevering work. It has been a pleasure to me to have delivered the Cavendish Lecture, and I can only again thank you for the reception which you have accorded me.

The Mirror of Practice.

A CASE OF OVARIAN CYST COMPLICATED BY TWISTING OF THE PEDICLE.

By Frederick J. McCann, M.D., C.M.(Edin.).

Physician to Out-patients at the Samaritan Hospital.

The following case is of interest as showing the clinical features of a complication of ovarian tumours by no means infrequent.

Mrs. H., aged 53 years, was sent to me by my friend, Dr. McDonnell, of Luton, in November, 1898. She gave the following history:—

Menstruation had ceased for five years. For a period of one year and nine months she had noticed her abdomen enlarging, this being accompanied by a feeling of discomfort.

Four months before I saw her she had an attack of pain in the abdomen and vomiting which lasted three days. During this attack no increase in the size of the abdominal swelling was noted. However, two months later she had another attack of retching and vomiting, with abdominal pains. The vomiting continued for fourteen days; the vomit was dark green in colour. The abdominal swelling was observed to increase and become harder. She felt so ill that she was confined to bed for six weeks.

On November 1, 1898, I made a careful bi-manual examination.

Per abdomen.—A well-marked tense fluctuating swelling was noted extending upwards to a point midway between the umbilicus and the xiphi-sternum. Bi-manually the swelling was found to be distinct from the uterus and to extend downwards into the pouch of Douglas.

I accordingly concluded that the tumour was an ovarian cyst, and that her symptoms were in all probability due to twisting of the pedicle.

On November 3 I opened the abdomen in the middle line, when a considerable amount of ascitic fluid escaped. The tumour was found to be adherent to the abdominal wall and to the intestines. The adhesions required careful separation and ligature in order to permit the withdrawal of the tumour from the abdominal cavity. The size of the tumour was reduced by puncture with a trocar and removing a quantity of dark brown fluid. It was then found that the pedicle was

twisted in a rope-like manner and that the cyst grew from the right ovary. The pedicle was ligatured below the twist and the tumour removed.

The left ovary was examined and found to be small and atrophic. The abdomen was flushed with hot saline solution (ʒi. to the pint), a quantity of the solution being left *in situ*. The abdominal wall was then accurately sutured with silk-worm gut sutures and the wound dressed with iodoform gauze, wool, strapping, &c.

The operation lasted one hour and ten minutes.

Description of Specimen.—The tumour removed was a multi-locular ovarian cyst with thick walls, the loculi being filled with dark brown viscid fluid. One portion of the cyst wall was dark green in colour.

After History.—The patient's temperature (taken every four hours) once reached 100° F. at 6 p.m. on the second day. It then fell to normal, and remained so until her discharge from the Nursing Home on the eighteenth day after the operation.

The improvement in the patient's condition was most marked, as she looked extremely ill before the operation. She has continued in good health since the operation.

Remarks.—This case is a well-marked example of a group of cases, viz., ovarian tumours with twisting of the pedicle, whose occurrence I believe to be more common than is generally accepted. Sometimes the diagnosis is only made after a *post-mortem* examination, as such cases, if left alone, are always fatal. It is therefore necessary to be able to recognise the signs and symptoms of this complication. The most frequent history to be obtained resembles that given in the case under consideration. Abdominal enlargement has been noticed, which may suddenly increase or become harder. Pain in the abdomen, accompanied by nausea and vomiting, together with elevation of temperature are more or less constant. These signs and symptoms may occur where the patient was not conscious of any abdominal enlargement, and may be the means of directing attention to the presence of a tumour hitherto unsuspected.

The treatment consists in speedy removal of the tumour, for even if gangrene has commenced in the growth the results of operation are frequently most satisfactory. Flushing the abdominal cavity will be found most beneficial in cases of this description, and for this purpose sterilised salt solution is useful, and does not irritate the peritoneum.

A CASE OF ADHERENT PERICARDIUM.

By CHARLES W. CHAPMAN, M.D.

Physician to the National Hospital for Diseases of the Heart, Soho Square.[1]

A. D., a boy aged 14, was admitted to the hospital on January 31, 1899, complaining of dyspnœa, cough, palpitation, and œdema of the legs.

History.—Influenza four or five years ago, rheumatic fever a year ago. Last summer he first had palpitation and some difficulty of breathing, which increased towards Christmas; the legs began to swell two weeks before admission. The father died in St. George's Hospital of heart disease and dropsy.

The patient has a pale, yellowish complexion, there is œdema up to the knees. No carotid or venous pulsation visible; heart considerably enlarged to the right as well as to the left, forcible impulse, apex-beat 5th space nipple line. At the apex is heard a rough pre-systolic and a soft systolic murmur; at the sternal margin of the left third space is heard a soft diastolic bruit, a thrill systolic in time is felt in the apical region. Liver enlarged, stomach dilated, urine sp. gr. 1015, with a trace of albumen. As the boy was so pale his blood was examined, and was found to contain 60 per cent. of hæmoglobin.

During the four months the patient's illness lasted there was more pyrexia present; pain in the pre-cordial region, with or without cough, was noted almost daily, sometimes the pain was substernal, and on two occasions it was inter-scapular. It was very difficult to obtain any information from the boy at any time. On the morning of April 24 the temperature fell, and by the afternoon it was at 97° F., when the patient died.

The *post mortem* was made on April 27, and I am indebted to Dr. Gibbes for the following notes:—

Body blanched, feet œdematous, thyroid gland enlarged.

Right pleura.—Costal and visceral layers adherent over lower lobe between the nipple and the anterior axillary line; the mediastinal layers of the pleura on both sides were adherent to the pericardium. The left pleura was adherent to the diaphragm.

Pericardium.—There was one long narrow strip of adhesion between the parietal layer and the chest wall. The two

[1] The notes were read and the specimen of the heart was shown at the May meeting of the Society.

layers were adherent throughout; over the right auricle and the great vessels was a straw-coloured layer of jelly-like lymph ½-inch thick; this extended over the surface of the left auricle, but was there only ⅛th of an inch thick. Heart, including the pericardium and the roots of the great vessels, weighed 31 ozs.; the apex extended downwards to the upper border of the 7th rib in the anterior axillary line, both ventricles and auricles were dilated and hypertrophied; the aortic valve was insufficient but capable of some resistance; the margins were studded with small hard granulations, the mitral orifice was funnel-shaped (early stage), the margins were fibrosed, adherent and granular, barely admitting two fingers; there were similar small hard fibroid granulations on the auricular surface of the curtains. Liver weighed 60 ozs. and was of a very marked nutmeg character; the upper surface was adherent to the diaphragm from recent peri-hepatitis. Stomach was much dilated; spleen and kidneys were congested.

Remarks.—This case illustrates the difficulties that are at times present in attempting to make a diagnosis of adherent pericardium, especially when co-existing with valvular disease and frequent pleurisies. There was only one small band of adhesion to the chest wall, consequently there were no signs of dragging during the cardiac systole. Then as to the pain, this was vaguely referred one time to the pre-cordial region, at another to the lateral portions of the chest where pleuritic rubs were often found. The constant pallor was doubtless due more to the crippling of the heart by the pericardial adhesions than to the valvular affections, though these contributed to it. At no time during the patient's stay in the hospital was there any evidence of effusion in the pericardial sac.

A CASE OF CALCIFICATION OF THE AORTIC VALVE, AND THE NEIGHBOURING PARTS IN A MAN, AGED 38.[1]

By Charles W. Chapman, M.D.

The notes of the case are briefly as follows:

J. P., aged 38, a barman, was admitted to the National Hospital for Diseases of the Heart on February 2, 1899. He complained of faintness, dyspnœa and palpitation on exertion, giddiness, loss of flesh, and night sweats. Family history good. Beyond small-pox at eight years of age, he

[1] The notes were read and the specimen of the heart was shown at the May meeting of the Society.

had had no illness that he could remember. Two years ago, after a severe chill, he first found that his breath became short and his heart to palpitate; so much did this increase that he was soon unable to continue his work. Two months ago the legs began to swell and he had night sweats.

Examination.—Patient is a thin, pale man. No visible pulsation in the neck. Pulse feeble, 84, regular and of medium tension. Arteries atheromatous. Cardiac impulse feeble. Apex-beat fifth space, nipple line. Cardiac dulness commenced at the third rib, the left limit was 11 cm. and the right limit 5 cm. from the mid-sternal line. There was a distinct thrill at the second right inter-costal space, where there were also harsh, rasping systolic and feeble diastolic bruits; at the apex there was a systolic bruit conducted to the axilla. The liver was enlarged. Lungs — impaired resonance and crepitation at right apex, crepitation at both bases, breathing harsh, especially on the right side. Urine —acid, clear (sp. gr. 1025), no albumen. Pulse tracings differed somewhat on the two sides and were anacrotic. A most distressing symptom during the whole time the patient was in the hospital was profuse sweating. There was also — with the exception of seven observations — a persistent subnormal temperature.

During the progress of the case the right chest became dull from the scapular angle downwards, and the physical signs generally pointed to pleural effusion. There was, however, more resistance than commonly occurs in this condition; moreover, there was no distension of that side of the chest. The chest was examined by the X-rays (by Dr. F. H. Low), but no distinct tumour could be discovered.

The patient sank on April 22.

Post mortem made April 24 (notes by Dr. Gibbes).

Body fairly nourished. Left pleura—a few loose adhesions to the diaphragm. Right pleura—both layers thickened, no adhesions, pleural cavity entirely filled with fluid (no lymph). Right lung—much compressed, two lower lobes carnified, upper lobe contained some air. Left lung—nothing special. Pericardium contained about 1 oz. of clear fluid. Heart weighed 28 ozs.; the apex was lying in the seventh space anterior axillary line. Left auricle and ventricle were dilated and hypertrophied, and were filled with mixed clots. Aortic orifice—the valves formed a hard, rough, calcareous diaphragm with a tranverse slit, 1·5 by 2 cm., the atheroma extended to the anterior mitral curtain, and there were patches of atheroma on the other parts of the valve; the orifice was dilated. The aorta had small scattered patches of atheroma just above its origin. Right heart was dilated

and hypertrophied, orifices were normal. Liver 50 ozs., nutmeg in character. Spleen and kindeys presented nothing worthy of note. The inferior vena cava was about 10 cm. in circumference.

Remarks.—Skiagraphy in chest cases is not at present of much value as an aid in diagnosis. On comparing the skiagram in this case with one of a normal chest the difference is slight indeed, and yet the lower half of the right lung was solid and airless. It is true we were able to say that there was no dense solid tumour, but no more. The illustrations of chests under the X-rays that one sometimes sees in the journals must, as far as the sharp definition of the thoracic organs are concerned, be taken with a considerable amount of salt.

Reviews and Notices of Books.

HERSCHELL ON CONSTIPATION.[1]

THIS small book is a reprint of a paper which was published in the *Clinical Journal* last year. It deals with a disease of every-day life, so to speak, concerning which, of course, much can be said. The author has succeeded well in his task of placing before the profession a comprehensive survey of the causes and treatment of constipation. This book contains many details the perusal of which the practitioner would probably find to be profitable. Indeed, as a monograph upon the subject, fully deserving the attention which the author has given it, we consider that it is worthy of high commendation. We note that Dr. Herschell objects to massage in the treatment of constipation, because it requires such special technical knowledge that unless administered by the physician himself it is useless, while if administered by the average operator, he asserts, it may be actually dangerous. These arguments against this special method of treatment can scarcely be regarded as convincing. Massage, in the treatment of constipation, is known to be very useful, and if the professional

[1] "Constipation and its Modern Treatment," by George Herschell, M.D. Lond., Senior Physician to the National Hospital for Diseases of the Heart, etc., Soho Square; late Physician to the West End Hospital for Diseases of the Nervous System. London: Henry J. Glaisher, 1899.

average operator cannot, under the physician's instructions, do that which the case demands, then one would suggest that the "professional average operator" would be well advised to choose some other occupation in life. Dr. Herschell, however, believes that the better, safer, and more rapid method of treatment is that of mechanical vibration. We can strongly recommend the perusal of Dr. Herschell's little book.

EASTBOURNE AS A HEALTH RESORT.[1]

THIS small brochure, of 31 pages, is a plea in favour of the popular Sussex sea-side resort of Eastbourne for further patronge. As a health guide to the locality it contains much interesting information, and with the materials at his hands Mr. Roberts has certainly been able to make out a good case for the town whose claims he advocates.

SAVILL ON NEURASTHENIA.[2]

THIS book consists of a series of lectures, delivered by the author at various times to post-graduate students, and a few of them have already been published. They contain a great deal of information upon an interesting and important topic; show careful preparation and painstaking on the part of the author, and are pleasant to read. We think, however, that the word "gentlemen," so frequently interspersed in the text, referable to the audience before whom the lectures were delivered, might, with advantage, have been omitted. The use of this word does not help to elucidate the subject-matter of the author's papers, nor does it tend to emphasise the points discussed. The remarks contained in Lecture V. on cerebro-spinal neurasthenia appear to us to be exceedingly good, the text being, "Neurasthenia is but the first step to madness in a certain number of cases." Dr. Savill discusses this aspect of his subject in an interesting and practical manner, and fully describes the treatment which he has found most beneficial in such cases. In the pages devoted to the treatment of neurasthenia generally some valuable hints are given. Altogether this contribution to a *fin-de-siècle* disease is well

[1] "Eastbourne as a Health Resort," by Charles Roberts, F.R.C.S., late Assistant Surgeon to the Victoria Hospital for Children, London. London: John Bale, Sons and Danielsson (Limited), 1899.

[2] "Clinical Lectures on Neurasthenia," by Thomas D. Savill, M.D., Physician to the West End Hospital for Diseases of the Nervous System, London; Examiner in the University of Glasgow, etc. London: Henry J. Glaisher, 1899.

worthy of perusal, and may be commended for the scientific as well as the practical manner with which it has been dealt by the author.

FERNIE ON ANIMAL SIMPLES.[1]

Dr. FERNIE has followed up his interesting work on "Herbal Simples" with another volume, if anything even more interesting, entitled "Animal Simples." In the preface he says to the ladies and gentlemen who may care to read his book, that there are animal simples enough and to spare to cure all their ailments, and assuredly he makes a valiant effort to prove that this is so in the succeeding pages. From the adder to the earth-worm, from saliva to cow's dung, it would seem that the whole of the animal kingdom and the major part of its products, are able to be pressed into the service of man in relieving his distresses. The book contains much that is amusing, a great deal that is instructive in folklore and superstition, and a proportion which is of use in the way of prophylactic or therapeutic measures. Take for instance, the following: "In former times a certain remedy for reforming a drunkard was to give him as many eggs of the screech owl, boiled hard, as he could possibly eat. He would for ever after be a total abstainer from intoxicating liquors." See what valuable hints may be gathered from the paragraphs of this work. Ten pages are alloted to "Salt," but we fail to see how this substance can possibly be considered an "animal" simple. Dr. Fernie must write yet another volume on "Mineral Simples." But we recommend the book as one from which many will derive pleasure in reading, and as one which is not out of date in these days of serums, gland extracts, and other useful animal medicinal agents.

EPISTAXIS.—Gillette recommends the use of hydrogen dioxide. He uses a teaspoonful or more in full strength, injected by means of an ordinary syringe. Relief is immediate. In operations in the nasal cavity, when bleeding obscures the vision, inject hydrogen dioxide. Ask the patient to blow the nose, and the field is clear again.—*Canadian Practitioner.*

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[1] "Animal Simples, approved for Modern Uses of Cure," by W. T. Fernie, M.D. Bristol: J. Wright and Co., 1899.

THE LIBRARY REPORT.

Special Library Fund.

The Council have decided to raise a "Library Fund" in order to supplement the Library, now that it has a proper housing in the Society's Rooms.

For this purpose they desire to see at least £50 contributed, and they hope that Members will contribute liberally and promptly.

Contributions from 2s. 6d. and upwards will be received by the Hon. Librarian, the Hon. Treasurer, or the Hon. Secretaries, either through the post or at any of the Society's Meetings.

The following sums have been already promised:—

From the Society's General Funds ...	£10	0	0
From the West London Post-Graduate College	10	0	0
From the Hon. Librarian	10	0	0

Donations have been received from the following gentlemen:—

	£	s.	d.
Dr. Franks	1	1	0
,, Clippingdale... ...	0	10	6
Mr. F. S. Coward ...	0	5	0
Dr. G. F. Briggs ...	0	2	6
,, W. T. Gardner ...	0	2	6
,, S. F. Pruen	0	2	6
,, G. D. Robinson ...	0	2	6
,, W. F. Roe	0	2	6
,, J. Starling	0	2	6
,, J. D. Davies ...	0	2	6
,, F. R. Walters ...	0	2	6
,, Barnes	0	2	6
Dr. D. F. Maunsell ...	0	2	6
,, Pardoe	0	2	6
,, A. Elliot	0	2	6
Mr. W. McAdam Eccles	0	2	6
,, T. G. Alderton ...	0	2	6
,, Percy Dunn	0	2	6
,, A. Gillingham ...	0	5	0
,, W. C. Musson ...	0	2	6
,, Chas. Andrews ...	0	5	0
Dr. F. H. Low	0	2	6
,, S. Lamb	0	5	0

Nearly all these have been collected by the Librarian at the Society's Ordinary Meetings, no one invited to give having yet refused; but it would be a great kindness to the Librarian if Members willing to give would kindly send their donations in the form of postal orders. Personal collection must obviously prove a very slow process.

Books Received.

From the Publishers.

Selby: a Pathological Morality, by Eppie Frazer. London: John Bale, Sons and Danielsson (Limited), 1899.

Eastbourne as a Health Resort, by Charles Roberts, F.R.C.S., late Assistant Surgeon to the Victoria Hospital for Children. London: John Bale, Sons and Danielsson (Limited), 1899.

The Treatment of Hæmorrhoids and Rectal Prolapse by means of Interstitial Injections, by Dudley Wright, F.R.C.S. London: Henry J. Glaisher, 1899.

Clinical Lectures on Neurasthenia, by Thomas D. Savill, M.D., Physician to the West End Hospital for Diseases of the Nervous System, London; Examiner in Medicine in the University of Glasgow. London: Henry J. Glaisher, 1899.

On the Study of the Hand for Indications of Local and General Disease, by Edward Blake, M.D. Second Edition. London: Henry J. Glaisher. New York: E. P. Putnam's Sons, 1899.

Constipation and its Modern Treatment, by George Herschell, M.D., Senior Physician to the National Hospital for Diseases of the Heart, Soho Square, London. Henry J. Glaisher, 1899.

Animal Simples, approved for Modern Uses of Cure, by W. T. Fernie, M.D., author of "Herbal Simples," "Botanical Outlines," etc. Bristol: John Wright and Co., 1899.

From Dr. H. F. E. Harrison.

Maunder's Operative Surgery.
Sir Astley Cooper's Lectures on Surgery.
Milton on Gonorrhœa
,, Skin Diseases.
,, Syphilis.
L. A. Sayre on Spinal Disease and Spinal Curvature.
Wm. Adams' Lecture on Curvature of the Spine.
Stimson's Operative Surgery.
Henry Smith's Surgery of the Rectum.
Cripps' Diseases of the Rectum, 1884.
Fournier's Syphilis and Marriage.
R. Harrison's Prevention of Stricture and of Prostatic Obstruction.
And several pamphlets.

Dr. T. Orme Dudfield has kindly offered about 100 volumes of the *Lancet* and *British Medical Journal*.

The Librarian and the Library Committee, in conclusion, earnestly appeal for donations of money.

The Book Club subscription in connection with Mr. H. K. Lewis is 11s. 6d.

THE ANNUAL CONVERSAZIONE.

THE star of the Society is still gloriously in the ascendant. The Annual Conversazione was a conspicuous success from every point of view. Again the record for attendance was beaten; again the record for exhibits was passed. The Hammersmith Town Hall was devoted entirely to the exhibits of the annual advertisers in the JOURNAL, and no fewer than twenty-nine firms thus availed themselves of the privilege of free space for bringing their products under the direct notice of the members and guests of the Society. The attendance in the hall at one time exceeded two hundred and fifty—last year it was one hundred less—and the proceedings passed off very successfully. The music was again under the able direction of Mr. Algernon Clarke, and two exquisite violin solos were rendered by Dr. Arthur Haydon. In addition, smoking and light refreshments contributed to the attraction of the *réunion*, and the Council of the Society, and especially Mr. McAdam Eccles, the zealous and indefatigable Editorial Secretary, are to be warmly congratulated upon the success of the meeting. The following is a full list of the exhibits.

Messrs. Allen & Hanbury (48, Wigmore Street, W.).

The exhibit of this well-known, enterprising firm was an important one in many ways, owing to the variety and excellence of the goods displayed. The novelties included Midwifery and Cycle Bags, Instrument Cabinets, Improved Centrifuge, Aseptic Cases and Instruments, Dr. Robertson's Comminuters, and Dr. Hewlett's Pasteurizers.

Messrs. Arnold & Sons (West Smithfield, London, E.C.).

The exhibit of this firm was a large and important one, and especial attention may be directed to a Set of Urethral Instruments including two Catheters for direct catheterisation through speculums. Urethral Searcher, Cystoscopes, &c., by Dr. Kelly. An Improved form of Funis Clamp, by Dr. Magennis. A New Anatomical Pessary, by Dr. Jackson. Vaccination Bag complete as approved by the Local Government Board. Aseptic Operation Trays, by T. Hope Lewis. Hydrocele Injection Apparatus, by Dr. Bowen. Improved forms of Mouth Gags. Self-retaining Drainage Tube, by Dr. T. Carter Wigg. New form of Automatic Needle-holder. Valvular Drainage Tube for empyema, by Dr. Taylor. Improvements in Post-nasal Curettes. A general collection of the most modern Aseptic Instruments for throat, eye, ear, nose, &c. Amputation, Lithotomy and Lithority Instruments of the latest and improved designs.

Messrs. John Bale, Sons, & Danielsson, Ltd. (83-85-87-89, Great Titchfield Street, Oxford Street, W.).

This enterprising firm had a large and attractive exhibit of Medical Books, Drawings and Illustrations, Clinical Figures and Charts, Physiological Lantern Slides, Brain Diagrams engraved on slates for the *post-mortem* room, large Anatomical Diagrams for lectures to nurses, ambulance classes, &c., Ideal Reading Cases, the Nurse's Clinical Case Book, with daily and four-hourly temperature charts, &c. Mr. Danielsson was present, and gave frequent demonstrations of the various processes of chromo-lithography, which excited a large amount of interest.

Messrs. Brand & Co., Limited (11, Little Stanhope Street, Mayfair, W.).

This exhibit contained many examples of the attractive and valuable specialities for which Messrs. Brand enjoy a world-wide reputation. Among these were included Essence of Beef, Mutton, Veal and Chicken, and the well-known Meat Juice (Brand & Co.), the essential feature of which is that the juice is of the finest English meat in its natural state, containing the albumen uncoagulated, together with the other nutritive properties, ready for immediate assimilation. We noticed also beef-tea, mutton, chicken, and jelly, consisting of pure beef-tea, mutton, or chicken broth, of about three times the usual strength respectively; also Invalid Turtle Soup, prepared by Brand and Co., expressly for invalids, from the fresh West India turtle, and this will be found of very delicate flavour and highly nutritious. Brand's Fever Food is an exceedingly palatable jelly prepared from beef, eggs, and cream. The preparation has a very pleasant flavour, and is certainly a valuable addition to the dietary of the sick, who will take it with pleasure and assimilate it with ease. Concentrated Beef Tea, Mutton Broth or Veal Broth, Chicken Broth, Game Broth or Turtle Broth, Soup (glaze), and Savoury Meat Lozenges—a form of nourishment which invalids and travellers will find of the greatest use. Peptones of Beef, Mutton, Veal and Chicken, and Gravy Soup, Mock Turtle and Ox Tail Soup, all of which are peculiarly adapted for invalid use, and eminently maintain the reputation of this firm for the excellence of preparation for such specialities.

Messrs. Burroughs, Wellcome & Co. (Snowhill, E.C.).

In drawing attention to this fine exhibit, at the outset we may mention that the whole of it was devoted to a display of those new compressed products of the firm which come under two headings, viz. : (1) Tabloid (effervescent and artificial), Mineral Water Salts, and (2) Tabloid effervescent medicinal substances. We venture to think that the members of the Society appreciated this idea of showing products of recent introduction only, and excluding preparations with which they are perfectly familiar and, when one takes into consideration the fine show made with the members of two of the latest groups of "Tabloid" Drugs alone, the vastness of the field covered by Burroughs, Wellcome and Co., was perhaps better appreciated than if specimens of each of their products had been shown. These two groups of "Tabloid" Drugs deserve all the attention which is attached to them by their isolation. They cannot fail to interest practitioners as much as any of the introductions of late years. The "Tabloid" Mineral Water Salts contain in small bulk the essential constituents of the natural waters whose names they bear. By their compactness and portability they render possible a continuous course of mineral water treatment without necessitating a journey abroad. "Tabloid" Mineral Water Salts are prescribed with a suitable dietary, and the patient can by adding one to ordinary spring water convert it into a fresh draught of mineral water, pleasanter and more refreshing than that from the natural source. The list already includes, "Tabloid" Vichy (Grande Grille) Salt; "Tabloid" Carlsbad (Sprudel) Salt; "Tabloid" Kissengen (Rakoczi) Salt; "Tabloid" Vichy Salt and Lithium Citrate; "Tabloid" Seltzer Salt. The "Tabloid" Effervescent Medicinal Substances include the B.P. effervescent preparations and also other drugs which are best administered in the effervescent form. A trial has proved to us that these preparations are extremely satisfactory. Immediately upon being placed in water a brisk effervescence ensues and the exact dose of the drug can be taken in a form so refreshing, agreeable and sedative to the gastric mucous membrane that tolerance and ready absorption are ensured. As with all "Tabloid" drugs the high quality of the ingredients and the perfection of manufacture are very marked. They offer a great advantage in portability and in accuracy over the older granular products, a teaspoonful dose of which may mean anything between one and two drachms.

The preparations exhibited included: "Tabloid" Citrate Effervescent, B.P., gr. 60; "Tabloid" Lithium Bitartrate, gr. 5; "Tabloid" Lithium Citrate Effervescent, B.P., gr. 60; "Tabloid" Lithium Citrate, gr. 4; "Tabloid" Magnesium Citrate (true) Effervescent, gr. 60; "Tabloid" Magnesium Sulphate Effervescent, B.P., gr. 60; "Tabloid" Magnesium Sulphate Compound Effervescent; "Tabloid" Piperazine, gr. 5; "Tabloid" Potassium Citrate, gr. 15; "Tabloid" Sodium Phosphate Effervescent, B.P., gr. 60; "Tabloid" Sodium Salicylate, gr. 5; "Tabloid" Sodium Sulphate Effervescent, B.P., gr. 60. Messrs. Burroughs and Wellcome have done great service to the profession in bringing out these new products.

The Chemists' Aerated Mineral Waters Association, Limited (45, Gifford Street, N.).

The Chemists' Aerated Mineral Waters Association, Limited, had, as usual, an attractive and tasteful display of their well-known popular goods. In the preparation of table waters this firm has sought perfection in every way that science and practical experience could suggest. The water, for example, used in the preparation of their Table Waters, is passed through a Berkenfeld filter; their machinery is silver lined, and their syphon taps are silver plated or of pure tin. Again, the gas generated is washed by being passed through a solution of permanganate of potash, the alkaline salts used are the best that can be obtained, and their quality testified to by the firm's analytical chemist. Among the goods shown were Syphons of Soda, Potash, Lithia, Piperazine, Lysidine, and a various assortment of their fruit syrups, which for purity and excellence the "Camwal" brand stands unrivalled.

Messrs. Cooper & Co. (80, Gloucester Road, South Kensington, S.W.).

Messrs. Cooper & Co., an exceedingly active and up-to-date firm, had a most artistic exhibit of their well known products. Foremost among these was their Oxygenated Mineral Water, manufactured under Royal Letters Patent. These waters are a great improvement upon the ordinary carbonated mineral waters: the more or less depressing and lowering effects of the carbonic acid being counteracted by the stimulating properties of the oxygen. The gases and water used in their preparation are *chemically* pure (*vide* Sir E. Frankland's Report). Freedom from metallic contamination is avoided by the use of porcelain-lined syphons. Lithia, Lycetol, Lysidine, Phenocoll, Piperazine, and Oxy-carbonated Distilled Water were shown. We noticed also the liquor quinine salicylatis of this firm, which has given excellent results in the treatment of gout, rheumatism, migraine, malarial fever, and allied disorders. The solution of this salt of quinine is more rapidly and effectually absorbed than when administered in powders, pills, or suspended in a mixture. The "cachoids" which were exhibited may be recommended as a very flexible, tasteless, and readily soluble form of wafer capsules, and are especially adapted for the administration of quinine, antipyrin, sulphonal, bismuth, and other similar drugs. In addition to the above, the firm exhibited their excellent Syrupus Glycero-phosph. Flav., of which we have already spoken in favourable terms, Emulsions of Cod Liver Oil and Petroleum, with the hypophosphites—preparations unsurpassed for elegance and stability, and various other goods, among which mention may be made of Kola Wine, Medicated Pastils of Charcoal, Cocaine, Cascara Sagrada, Aconite, &c., Nitrite of Amyl Capsules, and suppositories of Peptonised Beef and others. Altogether, Messrs. Cooper are to be congratulated upon their enterprise and success as shown in their exhibits, in introducing novelties which appeal to the medical public.

Mr. Davidson (140, Great Portland Street, W.).

This was an interesting exhibit and it attracted much notice. Its feature was a collection of beautiful Models of Eyes in glass, showing well-known diseases, such as cataract, iritis, corneal ulcer, pterygium, &c., &c., the counterfeit presentment being in many cases excellent. For the purpose of demonstrating to student classes such models are likely to prove very useful. It was with this purpose in view that Mr. Davidson carried out the suggestion of having the models made, and he is prepared to loan them to any surgeon requiring them for this object. There was an assortment of Trial Cases, Morton's and other Ophthalmoscopes; also the Davidson Optometer, designed to enable general practitioners to undertake refraction work, and many other appliances, of which special mention may be made of the "Improved Complete Sight Test," which has already been favourably noticed in the JOURNAL. Another optical appliance on view was "The Readorite," which consisted of a bi-cylindrical convex lens, mounted so as to permit of its being used for reading or writing without requiring the person to hold the lens in the hand.

Messrs. Down Bros. (21, St. Thomas's Street, Borough, S.E.).

This was a large and interesting exhibit of instruments for aseptic surgery including many of new design, among which may be mentioned Laplace's Forceps for intestinal anastomosis. Professor Kocher's Clamp Forceps for pylorectomy, also his Gland Forceps and Enucleator; Professor Doyen's Retractors for abdominal hysterectomy, Forceps and Clamp for progressive and multiple pressure; New Aseptic Amputation Retractors by Mr. Collinson, of Preston, and Automatic Retractor for minor operations by Mr. C. E. S. Flemming, of Freshford, Bath; Professor Kocher's Artery Forceps, and a new model of Aseptic Artery Forceps by Mr. Cuthbert Wallace. Dr. Rumboll's Inhaler for gas and oxygen, and Glass Inhalers for ether and A. C. E. by Mr. Clement Lucas. Several models of new and portable Aseptic Vaccine Cases, suitable for general practitioners, and complete Outfit Bag intended for Public Vaccinators together with suitable Aseptic Dressings.

The Electro-Neurotone Co., Limited (35, Westcroft Square, London, W.).

As at the conversazione last year the above firm had a most interesting display of the particularly neat and admirably finished samples of their apparatus. Evidence of material progress and extended appreciation was indicated by the exhibition of instruments made and sold by affiliated companies in France and America. While strictly adhering to the material features of the invention of the parent company as manufactured in this country, the various modifications of detail to suit special demands certainly increased the interest in the display. The American Neurotone Company, whose head-quarters and works are at Niagara Falls, sent some very pretty and handy samples of combined apparatus and dry cell battery in one case, with receptacle for carrying special electrodes. A special double-roller electrode for use with the neurotone, and much appreciated in the U.S.A., was also shown. Mr. T. C. Hodgkinson, the inventor and managing director of the English company, was in charge of the exhibit, and certainly merited the attention which was given to his demonstrations of the use and application of the apparatus. A very notable feature was the display of the new and popular class "O" Neurotones, which in response to friendly suggestion has been designed and produced at a cost of one-half the price of the higher grade classes "A" and "C," which have hitherto been so much approved. These cheaper instruments are models of mechanical excellence, and are rapidly finding increased favour with the profession. During the evening copies of the interesting paper by Sir James Grant, M.D., K.C.M.G., upon the subject of "The Alimentary Canal, and Human Decay

in relation to the Neurons," in which the use of neurotone application is so strongly recommended by the author, were distributed to members of the Society. It is worthy of note that every instrument, as exhibited and sold by this company, is guaranteed to be solely of British manufacture in every part. In passing, mention may be made of a very attractive display-sign which was used to direct attention to this exhibit, by the use of silver on a deep-blue ground ; the effect under the electric light was most attractive, and it could be seen from all parts of the hall.

Mr. A. E. Evans (5, Oakley Crescent, City Road, E.C.).

The exhibit of Mr. Evans was an interesting one in many ways, but chiefly as showing some excellent work in Orthopædic apparatus. We especially noticed a beautifully made spinal apparatus for lateral curvature, the chief mechanism being the true corrective back bones, each fitted with the rack motions, very neatly and closely made, and with adjustable plates. The disposition of the webbing straps were such as to ensure greater support than is usually obtained. We also noticed that the arm crutches were covered in India rubber, which keep more clean and resists perspiration better. Two other spinal appliances were also shown of different patterns. A very useful knee support was shown, suitable for various knee troubles, such as dislocation, fractured patella, displaced semi-lunar cartilage, lateral weakness, &c., with slight modifications. A steel leg apparatus with pelvic band, and made to entirely envelop the leg and fitted with ring catch just at the knee to allow the patient to walk without fear of falling by the knee giving way. This was a thoroughly well made apparatus, and is very useful for more severe deformities, and especially paralysis. Mention may also be made of a short leg apparatus to extend to garter, fitted with the raising spring to prevent the toes tripping on uneven ground in cases of inability to raise the feet. Another very useful and much used exhibit was a valgus boot, fitted with Little's concealed spring on Mr. Evans' improved "Treble inside arch," which effectually prevents the arch going down without itself going down, as is nearly always the case with the rubber pads. This boot, for cases of valgus, has been found perfect. A very neat and useful little appliance was the "concealed Valgus apparatus," consisting of steel Valgus plate and concealed spring extending to calf, the whole being quite concealed in the boot. A neatly made cork sole boot was also shown, suitable for cases where the feet must be kept flat, and for cases of shortening, where indicated, an extension appliance was shown, which looked very neat and light, and quite unnoticeable in wear. This is claimed to be the strongest and most durable and only form of extension where leg apparatus can be successfully fitted if required. The Valgus plates for flat feet, &c., were also of good design and well made.

Messrs. Fairchild Bros., & Foster (Snow Hill, E.C.).

This well-known firm had a handsome exhibit, prominent among their products being Zymine Peptonising Tubes, Peptogenic Milk Powder, Panopenton, and Pepsencia. Zymine Peptonising Tubes contain powder for the preparation of peptonised milk for those in whom the digestive power is weak. Peptogenic Milk Powder is an excellent preparation for the modification of cows' milk for infants. This powder when added to milk, water, and a little cream yields a product very closely approximating human breast milk. Panopepton is a bread and beef preparation in a fluid peptonised form. It is palatable and freely assimilable, and is most valuable as a nutrient and as a resource against sleeplessness when this is due to excessive fatigue, stress of mental work, or malnutrition. Pepsencia is a most pleasant preparation of pepsin in the liquid form. It is recommended for indigestion, and makes delicious junket.

The Hammond Typewriter Co. (50, Queen Victoria Street, London, E.C.).

The exhibit of the Hammond Typewriter Co. attracted a large amount of attention, and great interest was shown in the demonstrations of the "Ideal" and "Universal" Hammond typewriters, which were fitted with a variety of type especially adapted for the medical profession. There is no doubt that this typewriter is, *par excellence*, the one which, of all others, supplies the wants of the medical practitioner. We have every reason for highly recommending it, as for some years now we have proved its value. Medical men in need of a typewriter need never hesitate in buying a "Hammond."

Mr. T. Hawksley (357, Oxford Street, W.).

This was an important exhibit, and contained many appliances which were inspected with much interest by the members present. Mr. Hawksley is well known as an ingenious designer of apparatus for various surgical conditions requiring the assistance of the instrument maker. Among the many special appliances shown may be mentioned the knee trusses for dislocated semi-lunar cartilages; writers' cramp pens; infant weighing machine; various milk sterilizers, of which we have had previous occasion to speak very highly, the jugum penis —a ring and screw apparatus for use in the incontinence of urine in children during sleep, and for adults and the paralysed; also many acoustic instruments for the deaf, such as the audiphone, resonators, and others.

Hunyadi Janos Natural Aperient Water (Andreas Saxlehner, Buda-pest, Hungary, and Trafalgar Buildings, Charing Cross, W.C.).

The exhibit of the Hunyadi Janos Water was amply sufficient to recall to the members present that of all the natural aperient waters now in the market, the Hunyadi Janos Brand is the best. This water has been for many years before the profession and the public and its efficacy and valuable qualities have gained for it a popularity which no rival is ever likely to undermine. As an aperient it is safe and effectual, and experience has abundantly proved that it is highly approved of by patients.

Messrs. Isenthal, Potzher & Co. (85, Mortimer Street, Cavendish Square, W.).

The exhibit of this firm included a selection of Electro-Medical Apparatus comprising various Faradic and Constant Current Batteries; Galvanometers; Current Controllers; Accumulators; Sledge Coils; Instruments for Cautery; Little Surgical Lamps; A complete 12 in. Röntgen Outfit, all the necessary apparatus and accessories being mounted on a roller table. Some specimens of their Double Bulb Tube, the new Electrolytic Interrupter and various Screens and Radiograms.

Mr. B. Kuhn (36, St. Mary-at-Hill, E.C.).

This exhibit contained a full display of the well known products with which Mr. Kühn's name is identified, together with several new preparations which he is bringing under the notice of the profession. Foremost among all was the valuable antiseptic Chinosol in its various preparations, of which we have repeatedly spoken in high terms of praise; also Iodoformagen, a chemical compound of iodoform and albumen, possessing little or no smell, the penetrating odour of iodoform being totally absent. Tannalbin-knoll: a non-toxic intestinal astringent and anti-diarrhœal, indicated in acute and sub-acute and chronic enteritis, dysentery, cholera infantum, &c. Diuretin-knoll: a typical diuretic, which is perfectly soluble in warm water, and is devoid of toxic properties; indicated in all cases of dropsy, secondary to cardiac and renal inadequacy. Colchi-sal Capsules, which contain a solution of

chemically pure colchicine in natural methyl salicylate, obtained from Betula lenta; indicated in all gouty and rheumatic affections. Betul-ol Liniment—a compound liniment of salicylate, obtained from Betula lenta; it replaces Colchi-sal Capsules, where these are not tolerated by the stomach. Papain-finkler (Powder, Liquors, Pills, Tablets, Lozenges) which is the most active and trustworthy form of the well-known digestive ferment. It is indicated in all forms of dyspepsia, gastric ulcer, etc. It is also valuable for local application in diphtheria. Ethyl-chloride and Anestile, in glass tubes and cylinders: these little instruments are now much used for the ready and economical production of local anæsthesia; they are also very efficacious for the immediate relief of neuralgic and rheumatic pains, sciatica, &c. Argentol: a compound of silver and chinosol, which in presence of septic organisms sets free oxychinoline and silver (not oxide of silver, like all similar preparations). Is a non-poisonous, non-irritant, and only slightly soluble, and is used as a dusting powder for wounds, &c. Dermato—pharmaceutical preparations—Enigallol, Eurobin, Eugallol.

Mr. H. K. Lewis (136, Gower Street, W.C.).

The exhibit of this well-known publisher contained a comprehensive display of his latest and most important publications. Special mention may be made of his "Practical Series," which has gained so much popularity with the profession. These works are of a thoroughly practical nature, calculated to meet the requirements of the practitioner and student, and to present the most recent information in a compact form. We have had occasion to speak well of several of these volumes which have been sent to the JOURNAL for review.

Mr. W. Martindale (10 New Cavendish Street, London, W.).

This exhibit contained a comprehensive and varied assortment of the elegant preparations in connection with the manufacture of which Mr. Martindale's name is so well known. Among others we noticed Bougies, Nasal, or Buginaria of cocaine, cocaine and atropine, iodoform, copper sulphate. Urethral Bougies, with cacao butter, of iodoform and eucalyptus. Urethral Bougies, with gelatin, of zinc sulphate and extract of belladonna, and zinc sulphocarbolate, also Capsules (prepared with a perfected, readily soluble "mass," which will not become hard or contract on keeping) of cascara sagrada, colchicine salicylate, male fern extract, sandal-wood oil, and others. Glass Capsules, encased in cotton-wool and silk, containing volatile liquids for inhalation, of amyl nitrite (1, 2, 3, 4, and 5 minims), for angina; chloroform, 10 minims, for asthma; chloroform, 1 drachm, covered and uncovered, for obstetric use; ethyl bromide, 5 minims, for asthma, etc.; ethyl iodide, 5 minims, with chloroform, 10 minims; isobutyl nitrite, 3 minims. Cascara Sagrada (various special preparations of). Chelidonium Majus (Juice of) for cancer. Chloratifrice and Salicifrice, antiseptic tooth pastes. Also Ointments in tubes for ophthalmic use, various granular effervescent preparations, Pastils, and Peptonised Beef Suppositories. Lastly, a Urine Test Case, containing the apparatus and reagents requisite for the qualitative and quantitative estimation of urine for albumen, sugar, urea, in compact mahogany cabinet (6 in. × 2½ in. × 4 in. external measurements).

Messrs. S. Maw, Son & Thompson (9 to 12, Aldersgate Street, E.C.).

The exhibit of this firm contained many features of interest, and well sustained their reputation as instrument makers. Among the large collection of goods we noticed Aseptic Instruments and Dressings, &c., prepared under the personal supervision of a member of the profession, Amputation Knives, Minor Operating Knives, &c., the handles and blades of which were forged out of one piece of solid steel. Aseptic Instrument Cabinets, made of plate-

glass, with solid brass frames, the glass on all sides being fixed with Maw's Aseptic Cement, as made for St. George's Hospital, Middlesex Hospital, Westminster Hospital, Leeds Infirmary, &c.; Aseptic Dissecting Forceps, with "tong" end (no rivets); Aseptic Artery Forceps, with "tong" end, as suggested by Mr. Pringle; Aseptic Midwifery Forceps, with Dr. Maw's improved handles, which do not bruise the hand of the accoucheur; Adam's (J.) Aseptic Instruments; Adenoid Curettes, as suggested by the late Mr. Bellamy, of St. Thomas's Hospital; Allingham's Instruments for operation on the rectum; Antiseptic Dressings, &c., made according to special instructions received from Lord Lister. These are prepared, on strictly aseptic principles, under the supervision of a member of the profession, and are guaranteed to contain the correct percentage of the antiseptic employed. Bags of all kinds for bicycle, hand, or carriage, suitable for the general practitioner or nurse, with aseptic or other lining. In Maw's patent clinical thermometer is embodied the greatest improvement that has ever been made in these instruments. The index can be replaced in an instant, no violent shaking or knocking is necessary; one gentle swing of the hand is sufficient. Dental Instruments, as used at the Dental Hospital and by all the leading operators. Enema Syringes; Harrison's Instruments and Irrigators; Instrument Cabinets made of brass and plate-glass; Keetley's Instruments, &c.; Laryngoscopes, with improved mirrors, of best English manufacture; Lucas's (Clement) Nephrectomy Instruments, the latest set, with aseptic handles, &c.; approved by the author. Lunacy jackets, &c., made in accordance with the new regulations. Sterilised Ligatures, in long tubes; specially prepared under the supervision of Dr. Maw; Sterilisers, suitable for operating theatres or private practice; Swinford Edwards' Catheters, &c.; Stethonoscope, Teske's patent; a new and improved instrument for auscultation, approved of by all the leading physicians of the day; Thermo-cautery, the latest modification, known as the "Pakilortory." Trusses (Maw's Improved Scrotal, Draper's Adjustable), &c. Vaccination Instruments and Dressings, specially prepared to meet the requirements of the new Act. Ward's (Dr. Ogier) Aseptic Instruments for the general practitioner.

Messrs. Mayer & Meltzer (21, Great Portland Street, W.).

This well-known firm showed a selection of modern surgical instruments to meet the requirements of aseptic surgery, including sterilisers. Mr. G. L. Cheatle's Steriliser Forceps to prevent handling of the instruments by nurses or assistants during operations. Operating Gloves of Film Rubber and Thread as recommended by Lynn Thomas. Halsted's Mallets for suture of the common bile duct; and bags for intestinal suture. The Universal Tourniquet, the advantages of which are: (1) That it can be applied instantaneously. (2) Rubber is fixed at any point and it cannot slip. (3) It does not cause over-constriction of the deep tissues, nor produce abrasions of the skin. Mr. G. L. Cheatle's Pressure Pads. A Set of Dr. Abraham's Dermatological Instruments. Dr. Wilson Smith's New Aseptic Clover's Inhaler with man holes, by means of which the interior can be cleaned and the contents are visible. Dr. Dudley Buxton's Aseptic Chloroform Inhaler, and a selection of laryngological, nasal, aural and gynæcological instruments.

Messrs. Oppenheimer, Son & Co., Limited (179, Queen Victoria Street, E.C.).

This exhibit contained a most interesting variety of the well-known Palatinoids and Bipalatinoids especially manufactured by this firm. Of the former the number are legion, but the newest, which we can only spare space to notice, include: Palatinoids of Irional, a new, safe and prompt hypnotic; Triple Syrup, the well-known combination of the Royal Infirmary of Edinburgh, and consisting of Easton's Syrup, Parrish's Food and Compound

Syrup of Hypophosphites; Gastrodynic Palatinoids, a useful formula for digestive troubles, containing pepsine, pancreatine and lactophosphate of lime; the old-fashioned Guy's Pill; Guaiacol Carbonate; Guaiacum Resin and many others—in short, practically every drug and combination can now be obtained in the convenient and tasteless Palatinoid. Coming next to this firm's speciality—the Bipalatinoid of Ferrous Carbonate—this form of administering iron appears, if such be possible, to be even increasing in popularity with the profession, if we may judge from the great number of additional combinations which have been added since last year. It may be worthy of mention here that the remarkable results obtained by this "perfect Bland's pill" are due to the iron and alkali being kept from interaction and consequent premature decomposition by an air-tight, yet soluble, septum, so that the nascent ferrous carbonate is not actually present in the Bipalatinoid but is formed by chemical action in the stomach itself. Ferrous carbonate with red marrow, with pepsine, with arsenic and strychnine, and also with manganese dioxide. Another series of this ingenious method of preparing medicinal substances is exemplified in Bipalatinoids of guaiacol and compound hypophosphites, creosote and menthol, creosote and ferrous carbonate, chlorodyne and pepsine—all of which contain a liquid on one side of the septum and a solid on the other, while some actually contain two liquids, kept separate by the septum of jujube. A good example of this latter class is the Bipalatinoid of chlorodyne and creosote. In conclusion, we may add that a number of handy medicine-cases, some very compact aluminium hypodermic cases, and that "prince of spray producers" the Globe Nebuliser, also attracted much attention, and offered a good example of the enterprise of this firm in keeping in the front rank of the rapid march of progress which is necessitated by the requirements of present-day medical practice.

Messrs. Parke, Davis & Co. (21, North Audley Street, W.).

This was a large and attractive exhibit of the products for which this firm is so favourably known in the profession. Mention may be made of the following:—Standard Fluid Extracts: these fluid extracts are standardised, and represent therapeutically, in the proportion of cubic centimetre for gramme, the drug from which they are prepared. All drugs which contain definite active principles are subjected by this firm before using to a careful assay. Other powerful drugs, which cannot be satisfactorily assayed by ordinary methods, are tested physiologically, and are thus enabled to be guaranteed to be of full therapeutic activity. Notable examples of this class are Ergot, Indian cannabis, digitalis and strophanthus. We also noticed the Fluid Extract Cascara Sagrada, and the Fluid Cascara Sagrada Aromatic; this is half the strength of the Fluid Extract Cascara Sagrada, and meets the demand for a palatable preparation. Ergot Aseptic is a standardised physiologically tested preparation, free from acid and alkali and from all chemical preservatives, it is in hermetically sealed glass bulbs, each containing one cubic centimetre representing two grammes of standard ergot. It is perfectly stable and permanent. The Germicidal Soap is a valuable germicide and disinfectant. The Sugar-coated and Gelatin-coated Pills are coated by a method avoiding the application of any degree of heat which could impair their efficacy. The mass is of homogeneous character and ready solubility. The firm devote special attention to private formulæ work. Improved Hypodermic Case, made of pure aluminium; light, compact, of convenient shape, and will not tarnish; fitted with patent syringe, needles and assorted tubes of hypodermic tablets. Compressed Tablets of various forms; also Taka-Diastase, an isolated ferment in powder and compressed tablet form for the treatment of amylaceous dyspepsia. Taka-Diastase will convert at least one hundred times its weight of dry starch by proper tests. Taka-Diastase Compound Compressed tablets, containing in appropriate doses taka-diastase, pepsin, pancreatin, and sodium bicarbonate. Taka-Diastase with Chocolate, specially adapted for administration to children.

Liquid Taka-Diastase, Syrup Hematic Hyphosphites, a permanent, clear syrup, specially useful in debility or depraved nutrition, in anæmia, and in tuberculous affections. Liquor Sedans: this is a utero-ovarian sedative and anodyne, comprising appropriate doses of viburnum prunifolium, hydrastis canadensis, and piscidia erythrina, in combination with aromatics. Serums and Toxins:—(1) Antidiphtheria serum, certified after being thoroughly tested in the laboratories of the Royal Colleges of Physicians (London) and Surgeons (England), and supplied in hermetically sealed bulbs in potencies ranging up to 1250 antitoxin units per c.c.; (2) Antistreptococcus serum, for use in cases of puerperal fever, erysipelas, scarlatina, &c.; (3) Antitetanus serum; (4) Antitubercle serum; (5) Coley's mixture of erysipelas and prodigious toxins, for the treatment of sarcoma, and inoperable malignant tumours; (6) Tuberculin (Koch's original formulæ), the most trustworthy agent known for detecting tuberculosis in animals; (7) Mallein, for the diagnosis of glanders in horses. Syringe No. 3, serum sterilisable; with two needles and one filling needle.

Pathological Laboratory (West London Hospital).

As a proof of the excellent work done in the Pathological Laboratory of the West London Hospital, this exhibit was worthy of much praise. Some beautiful specimens mounted in formalin and glycerine attracted much attention; they included Tuberculous Spleen, Tuberculous Lung, Tuberculous Glands, Malignant Disease of the Liver, Acute Osteomyelitis, Epithelioma of the Tongue, Rodent Ulcer of the Skin. Among the slides shown were malignant adenoma of the knee, fibro-adenoma of the breast, nævus of the scalp, malignant adenoma of the rectum, round-celled sarcoma of the jaw. Among the cultivations on media were the tubercle bacillus, diphtherial bacillus, typhoid bacillus, bacillus coli communis, glanders bacillus, tetanus bacillus, leprosy bacillus, pneumonia bacillus, gonococcus. A large number of cover glass preparations were also exhibited.

Mr. Frank A. Rogers (327, Oxford Street, W.).

This exhibit contained a tastefully arranged assortment of the various apparatus of which Mr. Rogers has for some time made a speciality, namely, Sprays and Atomisers. The following is a list of those shown:—Rogers' Spray; also a specially devised apparatus for use therewith for spraying hot solutions into the nose or throat; the Consulting Room Spray, consisting of one spray which fits into six specially designed bottles, mounted on a handsome stand. It can also be had with a cover to keep out the dust. Pocket Insufflators and Atomisers; "Aqual," a bland, water-like tasteless oil; "Aqual" Atomisers; Convertible Douches for the Nose, Ear or Eye; a New Pocket Urethral Syringe; "Hypodermules": "a new system of hypodermic medication"; One small sealed glass flask containing measured doses of sterilised solutions instantly ready for hypodermic injection. Medical men are thus enabled to have at hand sterilised solutions of absolute purity by means of which an instantaneous and accurate injection can be procured at any moment. Pocket Cases containing a specially designed Hypodermic Syringe and supplies of Hypodermules; there were, in addition, other Pharmaceutical Preparations and Appliances. Mr. Rogers also showed an ingenious contrivance, consisting of a small lamp and hot water bath, into which the tube of a Rogers' Spray fitted, by means of which solutions can be kept at a high temperature and be sprayed directly into the naso-pharynx. This has been specially introduced for the application of hot Saline Solutions.

The Scientific Press, Limited (28 & 26, Southampton Street, Strand, W.C.).

The exhibit of this firm was a large and important one, and contained a varied assortment of the Medical, Surgical, and Nursing Books with which, as publishers, their name is well and favourably known. We have not space to

mention all those which were on view, but special attention here may be directed to the admirable series of Text-books on Nursing which has acquired so much popularity.

Messrs. A. & R. Scott, Limited (170, Renfield Road, Glasgow.).

This firm, who are the manufacturers of Scott's Midlothian Oat Flour Biscuits and Improved Oat Cakes, had a large exhibit of their goods. We were supplied with the following account of the process of manufacture of the Oat Flour Food, which will probably prove interesting to our readers:—Oats weighing from 44 to 46 lbs., natural weight, per bushel, are first carefully cleaned, and after having been kiln-dried are shelled three times so as to remove all the husk. A further process of freeing the groats from all fibre and vegetable matter is then gone through. This likewise removes the germ, and all fibre adhering to the kernel of the grain, so as to ensure that the groats are entirely free from every trace of vegetable matter or foreign substance. The groats are then ground by a special process through steel drums. These cut the grain in such a way as to render it possible to remove every trace of husk that adheres to any strayed undeveloped grain which may have escaped the previous processes, and thus, as stated by Dr. Wm. Wallace, "The whole of the valuable properties of the oats remain, minus the husk and vegetable fibre, of which even the finest oatmeal prepared in the ordinary way contains a portion." The cut of the granule in the food is entirely different from the granule in wheaten preparations made by the ordinary process of grinding, rendering it less impervious to the atmospheric moistures. The food is then dressed by a special process which removes all the gritty portions, while the rich blood-, bone-, and flesh-forming properties are concentrated. Analysis proves that the oat flour food contains phosphoric acid in ash ·87 and potash ·37. The food is recommended as light and easily digested, and of great value as an article of diet for infants, anæmic persons, dyspeptics, &c.

Messrs. G. Van Abbott & Sons (104, Wigmore Street, Cavendish Square, W.).

The various well-known popular preparations manufactured by this firm were well displayed in this exhibit. Their Diabetic Bread was shown in its various attractive forms, and one of its advantages is stated to be that it will keep good any length of time in a moderately dry place, so that it can be forwarded to any part of the world. We noticed also Gluten and Meat Biscuits for travellers and sportsmen, Diabetic Bran Biscuits for constipation in diabetic cases, Digestive Biscuits for adults and children, Nutritive Meat Biscuits, containing 20 per cent. Mosquera beef meal, useful for invalids, sportsmen and cyclists, and Meat Lozenges.

Messrs. Welford & Sons, Dairy Company, Limited (Elgin Avenue, Maida Vale, W.).

This firm had a large display of their various preparations of Milk, among which may be mentioned Asses' Milk (the supply of which they make a special feature), Humanised Milk, Peptonised and Sterilised Milk, Koumiss, Sterilised Cream, specially prepared Whey, Butter Milk, and Milk for the nursery, guaranteed free from tuberculous infection.

Miscellaneous Extracts.

A New Catheter.—The inherent uncertainties in the cleansing and sterilisation of such instruments as catheters, vaginal and wound irrigators, &c., which are often for long periods of time in close contact with highly infectious material, has led M. B. Freund to experiment with a mode of construction which seems to obviate the difficulties. Instead of closed tubes of narrow lumen forming ideal lurking-places for dirt and contaminating elements, his appliances represent a little more than half of the usual instrument, split lengthwise. This leaves simply a long open gutter, all of whose edges and angles are rounded and accessible, and which may be rendered sterile by chemico-mechanical means, without the use of heat, a thorough scrubbing with soap and water followed by a washing with bichloride solution, lysol or alcohol, sufficing to render it absolutely germ-free. In point of practicability the instruments of this design were found to be in no way inferior to those of closed calibre, a stream of fluid flowing freely along the groove and showing no inclination to leave it. Catheters with a cylindrical extremity, the groove not running quite to the beak to facilitate introduction, acted perfectly in drawing the urine, and the various irrigators that were tested were equally satisfactory. The instruments described were of hard rubber or metal.—(Habkanah, "Chirurgisch-gynäkologische Praxis," "Volkmann's klinische Vorträge," No. 226, October, 1898.)—*New York Medical Record.*

The Use of Saccharin for Infants.—Previous views have inclined to a belief that saccharin has little or no nutritive value, but is useful for sweetening infants' food, though there has been some doubt as to its effect upon fermentation in the bowels. Keller (*Centrlbl. F. Inn. Med.*, Aug. 6, 1898) has made observations upon metabolism when this substance was used to sweeten infants' food, and he concludes that, when the only purpose necessary is to sweeten the food, saccharin is the best of all sugary substances. The nitrogen-absorption in his experiments was always good when saccharin was being given. The amount of ammonia excretion was not increased, but was rather somewhat decreased, so that there seemed to be less fermentation in the bowel. These observations are important, as it is often difficult to use sugars in nourishing sick infants without increasing the acid intoxication that frequently already exists. In our experience, saccharin should be used with great caution, as in some cases it irritates the stomach.—*New York Medical Times.*

THE SURGERY OF THE URETER.—Delagénière (*Archiv. Prov. de Chir.*), in a review of operative procedures on the ureter, concludes that this branch of surgery is at present in its infancy, and that up to a recent date the indications for instrumental interference were not even clearly understood. The recent advance in abdominal surgery, especially the new methods of suturing the intestine and stomach, has of late encouraged surgeons to deal freely with the ureter with diminished dread of the supposed fatal results of supposed urinary infiltration. The advance hitherto made in the surgery of the ureter has been developed at the expense of renal surgery, particularly the operation of nephrectomy. In cases of hydronephrosis, instead of establishing a urinary fistula in the loin, or removing the kidney, the surgeon, after incision of the kidney and catheterism of the ureter, may discover the obstacle to the flow of urine, and remove it by direct intervention. In cases pyelonephritis and pyonephrosis, the gravity of which is often due to insufficiency of the natural drainage of the kidney, restoration of the permeability of the ureter permitting injections, and consequently disinfection of the upper urinary passages, will probably lead to recovery if the ureteral obstacle opposing a free discharge is removed. Ureterotomy, by enabling the surgeon to remove an impacted calculus, will remove a condition which in some instances has had a fatal result.

GOAT'S MILK AS A FOOD FOR CHILDREN.—Since the observations of Schwatz have been published, considerable interest has been taken in the spread of tuberculosis by the use of cow's milk, and as a remedy it was proposed that all such foods should be boiled before being used by the infant. Since that dictum was promulgated, further chemical analysis of boiled milk has shown that the nutrition of the fluid is greatly reduced. Keer has demonstrated that fresh unboiled cow's milk contains fat globules with granular contents, which are immediately taken into the blood to build up the cellular structure, while cooking totally destroys this constituent; the fluid albuminoid constituent is also so much transformed that it is difficult to dissolve and assimilate in the alimentary canal. He is persuaded that milk should not be boiled when its nutritious value is required, and he therefore proposes the milk of goats for the feeding of children, as this animal is immune from tuberculosis. He further proposes the precaution of having the vessels containing the milk sterilised and covered to prevent aerial germs from infecting the food. Another advantage in the

goat's milk is the constancy of its constituents, owing to the animal carefully selecting its own food and avoiding a great quantity of fluid matter. It can be fed in the stall with the same ease and satisfaction as the cow.—*Vienna Cor. Med. Press and Circular.*

GERMS IN BUTTER.—It is very generally known that milk furnishes an excellent medium for the growth of bacteria; but more important than this is the fact that, from its very general use, it affords one of the most dangerous vehicles for the dissemination of diseases. This undesirable property is also shared by butter. An appreciation of this fact should at least lead the consumer to investigate the origin and manner of preparation of the butter supplying his table. According to researches, there were contained in one drachm of butter (as much as the point of a knife would hold) 2,465,555 micro-organisms in that from the pat, and as many as 47,250,000 on the outside. Thus it is not exaggerating to state that the number of organisms swallowed in eating a moderately large piece of bread and butter would exceed the entire population of the Western hemisphere. Butter may contain varieties of bacteria which are of themselves harmless as regards life; but, on the other hand, it often affords a convenient vehicle for conveying pathogenic germs, as those of typhoid fever, scarlet fever, measles, tuberculosis, &c. The first three may be obtained from contaminated water which has been used for cleansing purposes in the preparation of the butter, and the latter be derived from the milk of a tuberculous cow. Two other varieties of bacilli have been isolated and described, and were found to be constantly present in the butter. Butter kept in a refrigerator showed a marked reduction of the number of bacteria; but the great majority of consumers of butter are without refrigerators or ice; hence during warm weather abundant opportunity is given for the growth of the germs. The danger may be somewhat obviated by boiling the butter; but as this renders it unpalatable, a better method is to sterilise the milk before the butter is made. Too little attention is given to this subject by sanitary authorities.—*Modern Medicine and Bacteriological Review.*

FŒTID BREATH AND ITS TREATMENT BY CARBONATE OF CREASOTE.—Bayer (*Rev. de Therap.*, December 15, 1898) believes that chronic affections of the nasopharynx are the cause of fœtid breath in obstinate cases. For instance, in women who are annoyed by bad breath at the period of menstruation one can always make out at such times a con-

gestion of the nasopharynx with an increase of its secretion. The best treatment is the intra-tracheal injection of carbonate of creasote. It is better to use the carbonate than the pure creasote as the latter sometimes provokes spasms of suffocation, whereas the carbonate of creasote, slightly warmed, may be injected by the ordinary intra-laryngeal syringe without unpleasant effects, in quantities of ·5 to 1·5 c.c. (15 to 45 drops). Such an injection does not produce irritation, and the relief is often so marked that there is no occasion to repeat it.—*New York Medical News.*

ENDOMETRECTOMY.—By this name Casati has introduced a process of extirpating the entire mucosa of the uterus through the abdomen and incised uterus, as a last resort in cases of hemorrhagic endometritis, and still save the organ. A. Dührssen has performed the operation four times, but by the vaginal route. After incising the anterior vaginal vault, the anterior cervix wall is exposed, and the peritoneum detached from the anterior fundus wall (extra-peritoneal method), or the fold incised (intra-peritoneal). The anterior wall of the uterus is incised as far as the fundus. A transverse incision is then made and the mucosa of the uterus and of the cervix excised, and the incision sutured in turn.—*Cbl. f. Gyn.*, 1898, No. 50.

PLANTAR HYPER-SECRETION CURED BY THE USE OF FORMALIN.—Gerdeck (*Therap. Monatshefte*, December, 1898) has had satisfactory results in the treatment of hyper-secretion of the sole of the foot by the use of a 10 per cent. solution of formalin applied morning, noon and night. The tender skin around and under the toes receives only two applications. Usually the third pencilling is sufficient to stop all secretion, remove the odour, and leave the skin in a dry toughened condition. Sometimes a fourth or fifth application may be needed to effect a cure. At the close of treatment four or five drops of concentrated solution of formalin are dropped into each boot. The secretion of sweat begins to show itself in two or three weeks, and by two or three months the treatment will have to be repeated, though in a milder form. Powders containing formalin are not as desirable as the solutions, but they are well adapted to dusting in the boots to take away the disagreeable odour.—*New York Medical News.*

THE TREATMENT OF GASTRIC ULCER BY LARGE DOSES OF BISMUTH.—Gastric ulcer has been treated by very many methods, some of which radically differ from one another, and

the use of bismuth in this affection is by no means recent. Within the last few years, however, it has been suggested by Fleiner that good results follow the use of massive doses of this substance. This clinician employed as much as 300 to 450 grains of bismuth in suspension in water, poured into the stomach by means of a stomach-tube after previous lavage, and in his paper he referred to the experiments of Mattheys upon the action of bismuth in hastening the cure of experimentally produced ulcers in the stomachs of dogs. At a recent meeting of the Manchester Therapeutical Society, Dreschfeld read a paper upon this subject in which he protested against the use of the stomach-tube as a method of administering these large doses of bismuth, on the ground that it is not wise to pass a tube into an ulcerated stomach. He stated that he had employed from thirty to fifty grains of bismuth subnitrate three times a day, suspended in water, and swallowed without the aid of a tube. Under these circumstances he found the condition rapidly relieved, vomiting ceased and digestion improved, although he allowed light nitrogenous food, such as fish or fowl, to be given. Ultimately the ulcer healed. These large doses of bismuth have never, in his experience, produced constipation, but rather a slight tendency to pain and diarrhœa. Dreschfeld has also found this method useful in both acute and chronic cases, and also in acid dyspepsia with neurasthenic condition.—*Therapeutic Gazette.*

Surgical Treatment of Exophthalmic Goitre.—M. Schwartz reported operations upon two cases of exophthalmic goitre. One of the patients was a young girl aged 23, in whom the disease began six years previously. Tachycardia supervened at the same time that the goitre increased in volume, and later on the general physical distress had become so great as to render life almost intolerable. A resection of the right sympathetic and two-thirds of the superior cervical ganglion was made, and at the same time that of the left sympathetic, involving also a section of the spinal, was equally made. The following operative results were observed. On the evening of the day of operation the eyelids could be made to close and to cover the ocular globes, which had been impossible previously. As respects the tachycardia, a very speedy amendment was produced, and the cardiac pulsations fell from 150 to 112. The volume of the tumour was diminished and all the general symptoms disappeared, so much so that the patient's condition was excellent, notwithstanding the persistence of a certain degree of exophthalmia and tachycardia. The second patient had a small goitre, but accom-

panied with marked exophthalmia and cardiac disturbances. Each night she had attacks of intense angina pectoris. In this case the operation presented serious difficulties. The great sympathetics were deep in the midst of infiltrated and erectile tissue, which explained a very intense thrill that characterised the goitrous tumour. In the first operation, lasting one hour, the superior cervical ganglion and five centimetres of the great sympathetic of the right side were resected, the left not touched because of the weakened condition of the patient. In a few days a diminution of the volume of the right half of the tumour and of the exophthalmia of the same side, was observed, but there was no cardiac change. A month later the same operation was performed on the left side, and there immediately followed a cessation of the cardiac symptoms, and soon a disappearance of the general troubles. Slight tachycardia remains, but the general amelioration is very considerable.—*New York Medical Times.*

Ocular Disturbances Accompanying First Menstruation.—Fachatte's Paris Thesis, 1898, is a careful study of the accidents that may occur with commencing menstruation. The ocular disturbances are the least known among them, but are often serious. Puch reports cases of interstitial keratitis, iritis, hæmorrhagic choroiditis, optic neuritis and separation of the retina. Caudron mentions cases of double exudative choroiditis and irido-choroiditis, all consecutive to the first menses. Others report embolism from some menstrual cause, and others hæmorrhage in the anterior chamber, cured by the first menses. Schevansky has observed six cases of iritis and irido-choroiditis in girls with irregular menstruation, and Pargoire reports a case of an irido-choroiditis developing at puberty, with constant catamenial exacerbations.—*Gaz. degli Osp.*, Dec. 22, 1898.

Operations on Syphilitics.—From a study of a hundred operations on syphilitic patients, Michailow draws the conclusions that the syphilitic diathesis is principally noticeable in a diminished elasticity of the vessels and diminished coagulability of the blood. Wounds bleed a great deal, especially in the tertiary period; granulations are scanty, and succumb to fatty degeneration or become hypertrophied, œdematous and pale. Wounds heal very slowly, with much serofibrinous or seropurulent secretion. The wound edges atrophy at the slightest pressure. Chemical antiseptics have to be avoided; moist warmth best favours healing. Plastic

operations and Thiersch transplantations frequently fail. This diathesis commences in the condylomatous period and is especially pronounced in the gummatous, and with insufficiently treated syphilis. He never noted any typical efflorescence at the wound. In a few cases severe pains in the tibia disappeared after trephining the tibia.—*Cbl. f. Chir.*, December 17, 1898.—*Journal of the American Medical Association.*

NOTES AND NEWS.

THE President has decided not to give a retiring presidential address, and in establishing this precedent he has taken a step for which all his successors in office will doubtless feel very grateful to him. All our presidents, I believe, have demurred at having the task imposed upon them of delivering two presidential addresses in one session. The opening address, of course, at the beginning of the session is a duty which every president expects to do, and presumably undertakes with pleasure. But the case is very different with a retiring address. Even the word "retiring" is suggestive of funereal reflections, melancholy leave-takings, and presidential apologies for sins of omission and commission during the year of office. Self-abasement under the sad circumstances of having to quit the chair through the lapse of time is the attitude which every president is expected to assume, and, therefore, the proceedings at the Annual Meeting have never had the opportunity either of being lively or of attracting a good attendance. As a matter of fact, the attendance at the annual meetings has always been a most attenuated affair, causing great difficulty in enabling a becoming variety to be obtained among the proposers and seconders of the numerous votes of thanks to the officers of the Society. Often it has happened that the proposers and seconders have not been in sufficient numbers to "go round," and then it is that the proceedings may become just a little exhilarating. Wireless telegraphic communications take place between the secretaries and certain members present; expressive contractions of the occipito-frontalis are observed in the officials, accompanied by some degree of voluntary proptosis. The messages may be especially directed to one member, but they can be plainly read by all, and their purport is "Do get up and propose the vote of thanks—there is nobody else left to do it."

So far as the JOURNAL is concerned the President's decision will have a most beneficial effect, for it will now enable me to publish the opening Presidential Address in the October issue. Hitherto this has been impossible, for the place of honour in this number has always been filled by the retiring address of the President in the previous session. Next October, however, within a week after the delivery of the opening Presidential Address, the members of the Society will be enabled to read it in their JOURNAL, instead of having to wait, as in former years, three months for its publication.

JUST opposite the West London Hospital an immense block of buildings is approaching completion, the erection of which is being carried out by the Rowton Houses, Limited. In this huge "doss house"—that, I believe, is the technical expression—accommodation is being provided for 800 beds, for which a charge of sixpence each per night will be made to those whose finances permit of this outlay. Quite possibly when choosing the site for the building its proximity to the Hospital materially influenced Lord Rowton and his colleagues, for to be within a stone's throw of medical aid, such as the Hospital affords, could not fail to be regarded as a distinct advantage.

WHILE, however, the huge population for whom the "doss house" has been built will have the opportunity of greatly benefiting by the near proximity of the hospital, all of us who are interested in the institution are hoping that the charity itself will also benefit in the matter. The opportunity is a splendid one for enlisting the active sympathies and interest of a nobleman who has established for himself a great reputation for business capacities. Lord Rowton should be invited to become a governor, and be then elected to the Board of Management, and afterwards be appointed a member of the House Committee. Possibly if the Duke of Devonshire were to be approached with the object of laying before Lord Rowton the urgent need which exists for pushing forward the affairs of the hospital, his lordship might be persuaded into accepting office. The prestige of his name would at once infuse enthusiasm into many who, perhaps, are more lukewarm than they ought to be in furthering the interests of this hard-worked charity.

BUT, again, what a splendid opportunity Lord Rowton would have of doing a memorable work. If at the present moment he came forward and, like Mettius Curtius, filled the

breach in the affairs of the charity, he would have the satisfaction of seeing both sides of the Hammersmith Road testifying to his great business abilities.

To complete the full scheme for the extension of the hospital £60,000 are required, and it is only necessary to glance at the imposing magnificent appearance, displayed on the architect's plans of the proposed extension, in order to be impressed with the conviction that the new erection would be a glorious monument to the memory of the person who with heart and soul undertook to carry the scheme to full fruition.

HERE then is a unique opportunity for a great philanthropic work. In its execution, no doubt, much energy and enterprise will be required, but some day the work will be done, and why should we not have a hand in the honour and glory of doing it. For, in truth, unless a Sydney Holland now comes upon the scene to do for the West London that which has been done for the London Hospital, it is certain that the next generation will reap the reward of carrying out a great work which ought to be, and, without much difficulty, could be, achieved in ours.

BUT I wonder if Lord Rowton has been invited to identify himself in any way with the West London Hospital. Presumably nothing has been said to him upon the subject, for on glancing at the last Annual Report of the Hospital I cannot find his name in the list of governors. The following is the only entry in the Report bearing upon the matter: "Rowton Houses, Limited, Employés, Hammersmith Road, W. (Box), £5 2s. 10d."

SEVERAL meetings have lately taken place of the Medical Council and a sub-committee of the Board of Management to consider the urgent question of the enlargement of the Out-Patient Department. In the course of the meetings a good deal of discussion ensued, and plans were submitted by Mr. Harvey, the architect of the hospital, showing how the enlargement could be carried out. Without trenching upon the present board-room, certain alterations could be effected by which increased accommodation could be provided at a cost of £800—or by throwing part of the board-room space into

this scheme, and by building a new board-room communicating with the ground floor corridor, in accordance with the original plan, the whole necessary alterations could be completed at an approximate cost of £1,500. If there appeared to be no prospect of raising the latter sum the general feeling of the Committee was that steps should be taken at once to start a fund for collecting £800, so that the lesser scheme might, if possible, be proceeded with forthwith.

WITHIN the past week, however, I am glad to be able to announce that the Board of Management met and decided that the large scheme should be adopted, and that steps be taken at once to give effect to this resolution.

DEATH has again been busy with the Board of Management of the Hospital. It is with much regret that I have to record the death of Canon Graham, which took place in Nazareth House on the 12th inst. Dr. Graham was well known as a Catholic divine, but it was as an educationalist that he attained a high position in the Metropolis. Of his work however, in this regard, it is not necessary to speak here; I am only concerned in referring to his connection with the West London Hospital. That he ever evinced a great interest in the charity goes without saying, for whatever the late Canon undertook to do in the form of public duty he never failed to throw into the work his best energies. A distinct feature, however, of his connection with the hospital was his friendliness with the staff, among whom it is not too much to say that he was a *persona grata*. Thus it was that, as a guest, he was from time to time seen at the meetings of the Society and at the Annual Dinner. His geniality and friendliness always secured for him a warm welcome, and in many ways the hospital is the poorer by his regretted death.

AROUND the Cavendish Lecture there has been centred this year quite a record of events. In the first place the Society were especially fortunate in securing as the lecturer the distinguished Transatlantic member of our profession, Professor Osler. Again, the President's dinner to the Council on the 15th June was especially noticeable, inasmuch as it was honoured by the presence of the President of the Royal College of Physicians and the President of the Royal College of Surgeons. Furthermore, nothing could have been more gratifying to the officers of the Society upon whom the re-

sponsibility fell of organising the meeting than the attendance at and the success of the Lecture and the Annual Conversazione. Professor Osler occupied the place of honour at the President's dinner, and he was also to be the honoured guest at the Past and Present West London Hospital Dinner on June 22, for which one hundred and forty acceptances had been received by the Honorary Secretary up to the time of going to press with the JOURNAL.

THE West London Hospital Dance on May 17 was a great success, and Dr. W. A. Turner, the Honorary Secretary, is deserving of hearty praise for the trouble and energy which be expended upon its organisation.

THE Cavendish Lodge (2620), has just lost its Secretary, Dr. W. H. Causton, and I am sure that his death will be deeply felt by all the members of the Lodge. It had been known for some time that Dr. Causton was suffering from albuminuria, and his illness during the past few months prevented him from discharging the duties of his office. Nevertheless, his death will be a great loss to the Lodge, for, apart from the popularity which he enjoyed among the members, he was an accomplished mason, whose assistance, counsel, and masonic experience were always at the disposal of the officers of the Lodge whenever occasion required them.

THE demands upon the space have been so great in this issue that I have been compelled to omit reference to several matters which ought to have received attention in this column.

P. D.

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THE

West London Medical Journal.

Published Quarterly under the auspices of the West London Medico-Chirurgical Society.

Original Communications.

THE PROGRESS OF RHINOLOGY.[1]

By James B. Ball, M.D.

Physician to, and Physician in charge of the Throat and Ear Department at the West London Hospital.

I thank you for the honour you have done me in electing me President of the West London Medico-Chirurgical Society. I am fully conscious that it is not in my power to perform the duties of this office with the ability, tact, and energy, which so many of my predecessors have displayed. I promise, however, to do my best, and I hope that my shortcomings will be forgiven. I propose to devote the time which the custom of the Society places at the disposal of its President at this, the first meeting of the Session, to a brief retrospect of the principal advances which have been made in rhinology, or perhaps I should say in modern rhinology. In reviewing the history of rhinology we need not go back to any very remote period. Its history is really contained in the last forty years. Of course, diseases of the nose attracted attention from the earliest times, but rhinology in the sense in which we now use that term, as a special department of study and practice, ranking with otology and laryngology, and usually studied and

[1] The Presidential address delivered before the Society on October 6, 1899.

practised in combination with one or both of these, is of recent growth. I shall endeavour to sketch its origin and development, the main lines along which it has progressed, and the various important results which have been achieved in this department.

If we glance for a moment at the state of knowledge of diseases of the nose, which existed about the middle of the present century, we find that it was by no means inconsiderable. In many respects it was abreast of that of other regions, and there was already a pretty extensive literature on the subject. The anatomy of the nose and of the accessory sinuses had been thoroughly studied and described, and not very much has since been added in this respect. Attempts were made to examine the nasal passages from the front, and specula had been devised for dilating the anterior nares, though apparently they were very rarely used. Surgeons had given much attention to new growths in the nose, and numerous operative methods and instruments had been devised for their extirpation. The main effects of syphilis of the nose were of course well known. A good deal of attention had naturally been directed to such common complaints as acute and chronic coryza, and epistaxis. The old idea that, in coryzal affections, a flow of serous fluid took place into the nose from the cranial cavity, had long been discarded. Both a simple and a chronic hypertrophic coryza were recognised. A good deal had been written about ozœna. An essential ozœna was described, independent of syphilis, necrosis of bone, or ulceration of the mucous membrane. It was known also, that certain cases of this sort might result from suppuration of the maxillary sinus. Suppurative affections of the maxillary and frontal sinuses were well recognised, and effective operations for their relief were performed, although the frequency and latent character of such affections were not recognised until a much later period. There was indeed a good deal of knowledge in existence of diseases of this region, ready to form the basis of more extensive, and much more exact knowledge, which was to come. Diseases of the nose at this period were chiefly studied and dealt with as a branch of surgery. General medicine took little account of them. The influence of the integrity of the nasal passages on the

condition of the lower air passages and the general health, though not absolutely unknown, was scarcely ever considered. Although the grosser lesions were fairly well known there prevailed a certain amount of confusion, and a want of exactness with reference to diseases of the nasal passages, resulting from the fact that these passages were not systematically inspected. Indeed a proper inspection of them was not possible with the methods then in use. Yet without such inspection further progress was difficult. There was, however, impending, a discovery which was to open up the way for a proper inspection of the nasal cavities, and was to unfold a more exact and complete knowledge of diseases of the upper air passages than had hitherto seemed possible.

The history of the discovery of the laryngoscope has often been told, and it would be beyond my purpose to repeat it here at any length. Many endeavours had already been made, with little success, to obtain a view of the image of the larynx, reflected in a mirror, when in 1854 Manuel Garcia, the well known professor of singing, undertook the attempt. Without any knowledge of previous experiments in this direction, he succeeded perfectly with the aid of sunlight, in observing the interior of the larynx, using "a little mirror on a long handle suitably bent." He published the result of his researches in a paper entitled "Observations on the Human Voice," which was read before the Royal Society in March, 1855. Garcia undoubtedly discovered laryngoscopy, but so far as the medical world was concerned, his work remained practically unknown and without result. It does not appear to have been known to Türck of Vienna when in the summer of 1857 he began to experiment with the laryngeal mirror. Türck appears to have been quite successful in his attempts, but for the moment he published no results. Like Garcia, he used sunlight, and at the end of the autumn was compelled to discontinue his experiments owing to the scarcity of this source of light. It was then that Czermak, the professor of physiology in Pesth, took up the work with zeal and enthusiasm. He was acquainted with Garcia's observations and Türck's experiments, and he commenced his own experiments with the mirrors which Türck had employed in the previous summer. He at once

perceived the practicability of using artificial light, and thus rendered the art independent of season and sunlight. He published his first article on the subject in March, 1858. Türck immediately claimed priority, which was promptly acknowledged by Czermak. Nevertheless a warm dispute arose, and was carried on for some years, around this question of priority. Perhaps this very contest helped to spur on both these great men to work with all the more ardour, and to vie with each other in adding more and more to the store of knowledge, which was rapidly accumulating in this new field of work. On the mere technical question of priority, however, it must be admitted that both must yield the first place to Manuel Garcia.

The discovery of the art of inspecting the naso-pharynx and posterior nares, was made by Czermak. Whatever difference of opinion may have existed as to priority of discovery in regard to laryngoscopy, the discovery of the art of posterior rhinoscopy must be assigned to him alone. Already in his first communication on the laryngoscope he indicated its practicability, and subsequently, in 1859, he was able to publish a full account of his method. The discovery of posterior rhinoscopy afforded a new method of examining the nose. For the first time these passages could be examined from the back. Moreover the methods of illumination which were introduced with laryngoscopy afforded a new and important aid to inspection of the nose through the anterior nares. From this date modern rhinology may be said to have begun.

Laryngoscopy and posterior rhinoscopy, as important methods of physical diagnosis, soon became firmly established, and a knowledge of these arts began to be diffused throughout the various European countries. Many improvements were introduced in the mirrors, and especially in the source of illumination. A large amount of pathological material, observed with the laryngeal and rhinoscopic mirrors, soon began to accumulate, and laryngology and rhinology as departments of study and practice began to assume a position of gradually increasing importance, from which they have never since receded. Among the early workers in these fields after Türck and Czermak, were Stoerk, Semeleder, von Tobold, Lewin, Gerhardt, Voltolini and others in Austria and

Germany; Mandl, Fauvel, Moura-Bourouillou and Bataille in France; Yearsly, Gibb, Morell Mackenzie and George Johnson in this country. While posterior rhinoscopy advanced side by side with laryngoscopy, the examination of the nose from the front, the natural and direct method was, comparatively speaking, making little progress. The improved facilities for illumination, by means of light reflected from a frontal mirror, which came in with laryngoscopy, afforded some stimulus to the practice of inspecting the nasal cavities from the front, and Czermak, in 1860, had advocated the employment of the two-bladed speculum of Markusowsky for dilating the anterior nares. Voltolini also had drawn attention to the practicability and importance of a more thorough exploration of the nasal passages from the front. Still for some ten years after the introduction of laryngoscopy, during which posterior rhinoscopy was assiduously practised, only very scant attention was given, in general, to anterior rhinoscopic inspection. In 1868, Thudichum (a member and former president of this Society) published some papers in the *Lancet*, entitled "On some new methods of treating diseases of the cavities of the nose," in which he drew attention to the prevailing neglect of inspection of the nasal cavities through the nostrils. This he attributed largely to the want of a proper speculum for dilating the nares. He described the speculum which he had devised, and he advocated the use of the oxyhydrogen light for illuminating purposes. There is a great deal of important matter in these papers, and nothing of equal importance on the subject had previously appeared in this country. They mark the author as being undoubtedly one of the pioneers of rhinology in this country. Very shortly afterwards Duplay, of Paris, and B. Fraenkel, of Berlin, devised useful forms of nasal specula, and advocated systematic inspection of the nose from the anterior nares. Many other specula were invented later, but one or other of the three above mentioned, or some modification of it, is mostly used at the present day.

Still the construction of a suitable speculum, or dilator, for the anterior nares by no means overcame the difficulties attending inspection of the nose from the front. The turgid mucous membrane only too often prevented a view of anything beyond the vestibule and the anterior end of the inferior

turbinal. Zaufal, in 1875, introduced funnel-shaped tubes for passing into the cavities and obtaining a glimpse of deeper parts. In certain cases they afforded some help, but in 1884 a discovery was made which rendered Zaufal's funnels obsolete, and, while affording unexpected facilities for rhinoscopic examination, was destined to give an impetus to rhinology, only second to that which was furnished by the introduction of the laryngoscope. This was the discovery of the effects of cocaine, first described by Freud, and utilised by Koller for the eye, and immediately afterwards by Jellinek for the nose and throat. Cocaine, which in laryngology, has afforded such valuable assistance to operative procedures, has proved of no less service to rhinology as an aid to diagnosis. By its constricting effects on the blood vessels of the mucous membrane, it opens up the passages to view, rendering the deeper parts accessible to thorough exploration with the eye and probe. Its value as an anæsthetic in the performance of numerous intra-nasal operations is not to be under-rated, but still, this must rank after its value as an aid to examination of the nasal cavities. Since the introduction of cocaine the diagnosis and treatment of nasal diseases have made rapid advances, and rhinology has acquired a precision and importance not previously attainable.

With the introduction of improved methods of examination, and the increasing attention given to careful exploration of the nasal cavities, anteriorly and posteriorly, more exact knowledge of pathological conditions gradually replaced the vague ideas which had hitherto prevailed. Morbid conditions were carefully studied with the aid of the eye and the probe. Symptoms were as far as possible traced to their true pathological causes and, as each condition was identified, an appropriate and rational treatment was sought for. Many operations could be undertaken, under the guidance of the eye, and with cocaine as an anæsthetic. New and more delicate instruments were introduced, better suited to the modern method of operating under the guidance of the eye. Snares of various kinds superseded the forceps, and the electric cautery, which Voltolini had long advocated, came into general use for many operative procedures. It is hardly necessary to refer to the influence on the progress of rhinology which resulted from the introduction of antiseptic methods,

and from the discoveries of bacteriology. These and many other things contributed to make rhinology what it is to-day, and not least, the fact that rhinologists were continually looking beyond their somewhat narrow specialty, and were demonstrating the many baneful effects which arose from morbid conditions of the nasal passages, not only on the ear, the pharynx, the larynx and the lower air passages, but on the general health and well-being of the individual.

The first great step in the progress of modern rhinology was the discovery of adenoid vegetations, a discovery which conferred the greatest benefit on otology and on general medicine. This important affection was first described by Meyer of Copenhagen in 1868. It is true that isolated instances of hypertrophy of the pharyngeal tonsil, or adenoid vegetations, had been observed with the rhinoscopic mirror, by Czermak, and subsequently by Loewenberg and Voltolini, but nevertheless to Meyer alone must be attributed the credit of discovering the disease. He first drew a picture of its symptoms and effects, pointed out its frequency and importance, and demonstrated the excellent results of operative treatment. Subsequent workers have elucidated certain points about the disease, and have introduced improved methods of operation, but, on the whole, Meyer's graphic picture of the disease has not been materially altered or added to. Time and further experience have only confirmed Meyer's observations. The great frequency of this disease, its injurious effects on the growth and physical and mental development of children, its bearing on the etiology of ear troubles, and the satisfactory results of operation, all mark the recognition of this affection as one of the greatest steps in rhinology that has ever been made. Meyer died in 1895. In October, 1898, a handsome monument was raised to his memory in his native town of Copenhagen, from subscriptions collected in all parts of the world, but a vaster and nobler monument exists in every land to-day, in the numberless persons, former sufferers from this disease, who owe so much to the comparatively simple operation introduced by him.

Although Meyer published his first account of adenoid vegetations in 1868, it took ten or twelve years before the importance of his discovery began to receive anything approaching widespread recognition. One of the direct

results of this recognition was the increasing importance which became attached to free nasal respiration. All forms of impeded nasal respiration were more carefully studied, and operative methods for their relief were improved and extended. From the reiterated teachings of rhinologists, the profession generally came to appreciate the fact that, side by side with its olfactory function, the nose fulfilled still more important functions; that, in its passages, cold air was warmed, dry air moistened, dusty particles arrested, and germs of disease arrested and possibly destroyed, and further, that the fulfilment of these functions could not be thrown on other parts without detriment. Mouth-breathing came at length to be regarded in its proper light as a diseased condition resulting from some impediment to nasal respiration, and not as a mere habit. Its ill-effects at all ages, but particularly in childhood, and the importance of timely treatment, gradually gained a more general acceptance.

Meanwhile rhinologists were becoming cognisant of the occurrence of certain disturbances in the nasal passages, as well as in distant parts, which seemed to arise in a reflex manner from nasal irritation. The recognition of a relationship between certain disturbances, chiefly of a nervous character, and nasal affections, was not altogether new, as occasional allusions to such a relationship are to be found in the older writers. Among modern writers, Voltolini was the first to point out, in 1871, the connection between nasal polypi and asthma, and B. Fraenkel shortly afterwards established a connection between other nasal affections and asthma. The subject, however, received no great attention until the publication of Hack's observations between 1881 and 1884. It was Hack's enthusiasm, and perhaps we may now say, his exaggerated views, which awoke the remarkable and widespread interest in the so-called reflex nasal neuroses, which manifested itself about this period. The result was that by 1890 the subject had called forth an extensive literature of its own. Besides asthma, hay fever, and certain cases of migraine and epilepsy, there was scarcely any disease the etiology of which was obscure, or the treatment unsatisfactory, that some enthusiastic rhinologist did not claim to have cured by the application of the galvano-cautery to the inferior turbinals, or by some other intra-nasal operation.

Enthusiasm in a new field of treatment must be set down as an excuse for the exaggerated views and the loose reasoning which characterised many of the publications of this period. A reaction, however, soon set in, and at the present day, while rejecting much that was put forward a few years ago, we retain many solidly established facts, especially relating to the etiology of paroxysmal sneezing and hay fever and of certain cases of cough, glottic spasm and asthma. We must all at least recognise that at this period the treatment of hay fever and allied conditions was for the first time placed on a rational basis, and was rescued from the hands of amateurs and quacks whose nostrums were up till then principally relied upon. The successful results of treatment in these affections contributed more than anything else to the habit of carefully examining the nose. All forms of nasal abnormality were carefully scrutinised, such as turbinal swellings and hypertrophies, spurs and crests on the septum, and other things, which up till then had received little attention.

Suppurative affections of the accessory sinuses of the nose, which at the present day form such an integral part of rhinological practice, received for a long time little attention at the hands of rhinologists. The earlier rhinological treatises almost completely ignored them, and the treatment of suppuration of the sinuses continued in the hands of surgeons. Of course it was only the maxillary and frontal sinuses that there was then any question of, and the great frequency of suppurative affections of the sinuses running their course without any gross external signs was completely unknown. It was Ziem who first led the way in this department. In 1880, and subsequent years, he repeatedly demonstrated the great frequency of suppuration of the antrum, manifesting itself by a purulent discharge from the nose, and unattended by any of the classical signs which were still enumerated in most surgical works as characteristic of the disease. Ziem's observations were quickly confirmed by others, and were shown to apply equally to the other sinuses. Thus a new field of pathology, hitherto ignored, was opened up. The ethmoidal cells and sphenoidal sinus were for the first time brought within the range of diagnosis and treatment, and the frequency with which suppuration simultaneously affected several sinuses, was demonstrated. In

the year 1889 Heryng introduced the method of electric transillumination, a method which has proved of considerable service in the diagnosis of diseases of the accessory sinuses.

During the last ten years suppuration of the accessory sinuses has occupied more attention than any other branch of rhinology. The important *rôle* which the infectious diseases play in the etiology of these affections has been established. According as the great frequency of sinus suppuration has been recognised, new light has been thrown on a multitude of cases hitherto ill understood. Gradually the range of suppurative affections of the nasal mucous membrane, of cases which were mostly included under the designation of ozœna, has been narrowed, and the field of suppuration of the accessory sinuses has been correspondingly widened. The process is not yet completed, and it remains to be determined in the future what is really the frequency of chronic suppuration of the nose, independent of bone disease, and unconnected with disease of the accessory sinuses.

Many cases of severe and intractable headache, and neuralgia, have been traced to a chronic, and otherwise very latent, suppuration of one or more of the accessory sinuses, and relief has been afforded by operative measures. The pathology of nasal polypi has received considerable elucidation from the discovery of the frequency with which these growths, especially in the most intractable cases, are symptomatic of sinus suppuration. Meanwhile the diagnosis of suppuration of the different sinuses has attained greater precision, and great advances have been made in treatment. The obstinate nature of many of these cases has been met and overcome by more rational as well as more radical measures than were hitherto employed, and undoubtedly the treatment of these troublesome affections is rapidly being placed on a satisfactory footing.

In the preceding sketch I have endeavoured to trace the main lines upon which the diagnosis and treatment of diseases of the nose have advanced since these diseases began to be systematically and intelligently studied with the aid of the new methods introduced with the discovery of the laryngoscope. We may now look back for a moment, and parting company with those who were specially working at laryngo-

logy and rhinology, see how these new branches of our art, for we must take them together, fared with the profession generally. In doing so we may confine our attention to this country. It must be admitted that for some time they were by no means taken up warmly by physicians and surgeons. It was not because they were new, for the history of the last forty years could show that new methods of diagnosis and treatment have been taken up warmly enough, so long as the new methods were such as each and all, who so desired, could easily acquire and practise. But here was something new, making great professions, trenching on everybody's ground, the *technique* of which, however, was too difficult to acquire without sitting down and being taught—without going back to school, so to speak. Under these circumstances an attitude of scepticism was to be feared, and as a matter of fact was very widely adopted. It is so much easier to be sceptical than to learn. For a considerable time laryngology and rhinology were pretty generally ignored. If physicians and surgeons did not learn the new arts they could not teach them. The eye and the ear might have their special departments, but not the throat. It is safe to say that fifteen years and more after the introduction of the laryngoscope, there was not a single person connected with many of the large London teaching hospitals who could use the laryngeal or rhinoscopic mirror. It was left to the energy of private individuals to start special hospitals, and to diffuse a knowledge of these arts. But of course this state of things could not last. The teachers of medicine and surgery might ignore the throat specialist and all his works, but the patients went to the specialists and to the special hospitals. Laryngology and rhinology went on developing, owing to the labours of the comparative handful of men in various countries who had devoted themselves to this branch, and the discoveries which were being made, and the therapeutic triumphs which were being achieved, more than justified the existence of the specialty before the public and the profession. Gradually, but surely, the specialty asserted itself; and departments for diseases of the throat were established first at one hospital and then at another. But meanwhile rhinology was by no means keeping pace with laryngology. Ignored by the rest of the profession it received, too often, nothing but neglect

from those who ought to have acted as its special guardians in the throat and ear departments. Nevertheless rhinology, as we have seen, had its devotees, and it was steadily compelling the attention of its sister branches. To-day its importance is generally recognised. It has taken its place side by side with laryngology and otology, indispensable to each of them, and demanding and receiving from each, an equal share of attention. From them it can never be dissociated. At the same time it presents problems of its own in the fields of pathology, diagnosis and treatment, which will only be mastered by those who devote to it the same time and attention as are given to the sister branches.

In sketching the progress of rhinology I have made no attempt to enumerate the names of the workers who in every country have taken part in the advancement of our knowledge of the subject. The names which I have mentioned have been mostly pioneers in each particular department, but I have no doubt omitted many names of equal or greater importance. It would, however, be hardly excusable in any sketch, however brief, of the progress of rhinology, to omit alluding to the valuable work done by Zuckerkandl. His book on the normal and pathological anatomy of the nose and its accessory cavities is a storehouse of exact and valuable information, which has contributed enormously to the progress of rhinology. Nor, I think, should we, in this country, forget the name of Morell Mackenzie. Though his interest lay in laryngology rather than in rhinology, he was one of the earliest and ablest exponents of these subjects in England. By founding the Throat Hospital he pointed out the way to the authorities of the General Hospitals, and at the Throat Hospital were trained many of those who subsequently taught laryngology and rhinology elsewhere. If in later years Mackenzie was sometimes involved in a position of apparent antagonism to the profession, it may be remembered, in extenuation, that he had in earlier days to bear the brunt of a good deal of the antipathy which prevailed at that period against the throat specialist. It is a significant fact that although he became a member of the Royal College of Physicians of London very early in his career, that College never elected him a Fellow. Most assuredly, he will be remembered for his services to laryngology in its early days,

in this country, when most of those who contributed to his exclusion from the Fellowship are resting in well merited oblivion.

Times have changed. Laryngology and rhinology are no longer under a cloud. They are taught and studied in all our medical schools, though not to the extent that might be wished. Those who make a specialty of these subjects are no longer regarded with suspicion on this account. Their position before the profession depends on themselves and their work. It would be idle on my part to pretend that no murmurings are ever heard nowadays against throat and nose specialists. It would be a delicate and difficult matter to attempt to decide whether any justification exists for the criticisms sometimes passed. I am certain, however, that most of the critics are not competent to judge in the matter. It is no doubt a fact that the throat and nose afford a good field for the man who is prone to operate unnecessarily; a good field for the performance of small operations which can do no good, and, with care, should do no harm. It is easy, too, to magnify the importance of such operations. Can any tendencies of this description be truthfully attributed to laryngologists and rhinologists at the present day? I believe not; but even if such practices could be proved against an individual here and there, none would be found to condemn them more severely than the vast body of those who practise laryngology, rhinology, and otology in this country.

BRITISH SANATORIA FOR THE OPEN-AIR TREATMENT OF TUBERCULOSIS.

THE rapidly growing importance of sanatoria for the open-air treatment of tuberculosis in this country, and the frequent demands for information respecting those already in existence which have come under our notice, prompted the suggestion that a "Sanatorium" number of the JOURNAL would prove acceptable to the members of the Society in more ways than one. With a view, therefore, to carry out this idea, the proprietors of all the sanatoria in the United Kingdom were invited to contribute a descriptive account of their respective institutions, together with details of the treatment pursued thereat, and the accounts thus furnished will be found in *alphabetical order* below. We regret, however, that the list is not quite complete, inasmuch as in one or two instances no reply was sent to our communications. Nevertheless, for all practical purposes we believe that the list will be regarded as amply sufficient, and, indeed, it may be added that this is the first attempt made to give in a detailed form all the necessary information respecting the British sanatoria now open for the reception of patients.

A perusal of the statements—and these as affording a comparative study of the open-air treatment as conducted in this country are especially interesting—suggested one or two points for comment. In the first place the list shows that almost without exception the sanatoria located in England are designed for the benefit of the well-to-do classes; while in Scotland, curiously enough, up to the end of last month the only sanatorium open was that of the Victoria Hospital, near Edinburgh, for the gratuitous treatment of the tuberculous poor on the open-air principle. Thus in England no sanatorium is available for the benefit of poor patients, and it is impossible to believe that this state of things will be allowed to continue for long by the philanthropic public. Furthermore, inasmuch as one of the principles of the open-air treatment is the provision of pure air, the question arises whether or not it has not now become an anachronism to continue to treat tuberculous patients in a town. From this point of view the authorities of the London Consumption Hospitals should consider the expediency of taking early steps to dispose of their institutions, and, with the proceeds, to build sanatoria in country districts to which the tuberculous London poor could be despatched for the purpose of undergoing the open-air treatment. Again, in keeping with this suggestion, is the question of the foundation of Muni-

cipal sanatoria for the treatment of the pauper tuberculous patients. In short, the problem of making provision for the open-air treatment of the phthisical poor is one which, sooner or later, will have to be seriously taken in hand, and it is for this reason that in the list below will be found a full report of the Victoria Hospital, near Edinburgh, in which interesting details are given of the system there carried out for the benefit of the poor patients.

At present the existing sanatoria are being conducted merely and solely with a view to the treatment of pulmonary tuberculosis. But it is believed that other forms of tuberculosis would benefit from this special treatment, and the possibility that this might prove to be the case is such as to endow the organisation of sanatoria in this country with additional importance.

There remains, lastly, to consider the question of the results of this treatment. It is claimed by authorities upon the subject that already the open-air treatment of tuberculosis in this country has passed beyond the experimental stage, and that the results are equal to those on the Continent. The hope may here be expressed that this is true, in substance and in fact, and that for the rest of time hapless British tuberculous patients will be able to be cured of their malady without having to leave their native shores and become exiles, for a more or less lengthened period, in a foreign land. Time, however, only can show whether this will prove to be the case.

BRINKLEA SANATORIUM, BOURNEMOUTH.

(Dr. Kinsey-Morgan.)

Bournemouth has ever been in the foremost rank as a health resort for chest diseases, especially phthisis. So many have been the cases of absolute recovery from incipient phthisis, or a quieting down of those in which the disease has been more advanced, that it has more than proved its claim to be England's Sanatorium *par excellence* for chest cases generally.

The principles of treatment, as first taught by Brehmer at Göobersdorf, and carried out so successfully under Dr. Walther at Nordrach, have come to be recognised as the best. They consist of careful feeding, graduated exercises, rest in shelters or large well-ventilated rooms with open windows, and constant supervision; and they are rendered more effective when the patients are removed from their habitual climates, home surroundings, and home worries.

Well nigh every detail of the patient's life is regulated by

the physician, and he is induced by judicious management to eat very much more than he is accustomed to.

There are three regular meals a day, and in addition milk with biscuits or fruit is given at stated intervals. Patients thus treated soon lose their cachectic look and put on an aspect of robustness, they breathe better, and the rapidity with which they put on flesh is often phenomenal.

In this state, with every muscle stronger and every organ functionally healthier, they are within a brief period able to return to their usual avocations, not as chronic invalids, but either actually cured or in such a state that they are no longer so ill as to require regular attendance, but maintain their weight, and eventually live down their invalidism.

Phthisical patients in hotels and boarding houses, and even in some private houses, are at many disadvantages as regards treatment, surroundings, proper medical control, and supervision. Much of the day is spent in sunless, ill-ventilated, over-crowded rooms, with little or no thought of hygienic principles; thus it is well arranged sanatoria are imperative.

Brinklea, by its unique and elevated position, standing in two acres of beautifully shrubbed lawns, overlooking the golf links, and in close proximity to the pine woods, is admirably adapted for the *cure à l'air*. We have here on our southern coast a locality possessing a dry soil, good sanitary arrangements, and an equable climate, which compares favourably with foreign health resorts.

The house is well planned, having lofty corridors and large airy bedrooms, varying in capacity from 1,760 to 5,144 cubic feet, and has accommodation for twenty-five patients. It is well sheltered from N. and E., has a sunny aspect, good ventilation, and all the walls are distempered with Hall's washable colours.

The general supervision and medical control are conducted by Dr. Kinsey-Morgan, whose knowledge and long experience of the open-air treatment of tuberculosis is in itself a guarantee.

The terms are inclusive, from 3½ to 7 guineas per week, and vary according to the bedroom occupied, the only extras being personal laundry and alcoholic drinks.

Patients are in no way precluded from selecting their own physician.

Telephone No. 450. For all further particulars and illustrations of the Sanatorium application should be made to Mr. F. W. Allday, manager, Brinklea, Bournemouth.

COTSWOLD SANATORIUM.[1]

(DR. PRUEN AND MR. C. BRAINE HARTNELL.)

This Sanatorium for the cure of tuberculous diseases, especially of the lungs, is situated on the Cotswold Hills, near Cheltenham, at an elevation of 800 feet. It has a southerly aspect, overlooking the Stroud Valley. From behind the grounds a view of the whole Severn Valley is obtained, stretching from the Shropshire Hills in the north to the Bristol Channel in the south-west. The entire range of the Malvern Hills is seen in the north-west, with the Welsh Hills beyond them. The soil is Oolitic Limestone, from 150 to 300 feet thick.

The Sanatorium stands in its own private grounds, nearly 70 acres in extent, well wooded with fir and beech. The grounds stand in the centre of a tract of common land about 1,000 acres in extent, and similarly wooded. Protection against cold winds is afforded by the trees, as well as by the rise of the ground—50 feet in height—behind the sanatorium to the north and east.

The buildings consist of residential blocks for patients, an administrative block, servants' block, and engine house block. Most of the buildings are on one floor, each residential block being of stone or of wood on a stone foundation, with five or six bed rooms for patients. In front of each block is a glass-covered verandah, 10ft. wide, and to the sides and back a narrower one of the same kind. The ends of these verandahs are protected by screens of wood and glass. There are also shelters of different kinds in the grounds.

The heating is by hot water pipes, which pass through the stone foundations under the floor and are connected with radiators in each room and corridor. The verandahs are warmed in the same way. Every room has sanitary walls, floor, and ceilings, and is supplied with hot and cold water for washing. There are comfortable bath rooms, with hot and cold water baths, shower baths, and needle bath.

The lighting is by electricity throughout, the current being obtained from a dynamo worked by an oil engine in a house near the Sanatorium. This current also works an electro motor which pumps up the water supply from two springs in the private grounds, 160 feet below the Sanatorium.

The treatment is on the now well-known lines, first practised in England by Mr. Bodington, of Sutton Coldfield, near Birmingham, in 1836; then carried out into a well-

[1] A view of the east wing of the main block of this Sanatorium appeared in the July issue of the JOURNAL (see page 192).

thought-out system by Brehmer in Germany, in 1859; and during the last ten years worked out in great detail by Dr. Otto Walther, at Nordrach, in the Black Forest. Patients live all day in the open air, take the amount of carefully graduated exercise which is daily prescribed for them, and have a diet of nourishing food selected to suit the disease, and adapted to English tastes.

One of the principals and also the house physician resides in the building.

Attendants and friends are only exceptionally permitted to live at the Sanatorium.

At present there are thirty beds, but these are being added to.

The charges are five guineas weekly. These are inclusive of medical attendance, board and lodging, the only extras being personal washing, alcoholic beverages, and a special nurse, should one be required. Accounts are delivered weekly.

The Sanatorium is seven miles by road from Cheltenham, Gloucester, and Stroud. Letters and parcel post packages to patients should be addressed: Cotswold Sanatorium, Cranham, near Stroud. Telegrams: Cotswold Sanatorium, Birdlip, near Gloucester. Parcels by train: Cotswold Sanatorium, care of The Birdlip Carrier, The Crown Inn, Cheltenham. A carriage meets trains by appointment to take patients from Stroud, Gloucester, or Cheltenham, to the Sanatorium. All information may be obtained from either of the two physicians or from the Secretary.

Physicians: S. T. Pruen, M.D.; C. Braine Hartnell, L.R.C.P., M.R.C.S. House Physician: G. Crace-Calvert, M.B. Secretary: T. E. Rickerby, 2, Ormond Place, Cheltenham.

CROOKSBURY SANATORIUM.

(Dr. F. Rufenacht Walters.)

This institution is being built in the lovely tract of country which lies to the south of the Hog's Back, near Farnham, in Surrey. Within easy distance by rail from London, it is situated in open country of an eminently suitable kind, and has sufficient hilly ground attached to it (32 acres) to permit of walks of the most varied character—level and sloping, over grass and heather, or under the pine trees which cover much of the surface.

Among the most important requisites for successful treatment of consumptives are pure air, a dry soil, a southerly

aspect with a good fall, shelter against cold winds, and a moderately bracing climate. All these are possessed by the Sanatorium at Crooksbury Ridges. The soil—Folkestone beds of the lower greensand—is mainly sandy for several hundred feet below the surface; pine-clad hills lie to the north, east, south-west and west, protecting a shallow valley trending south. At the head and other side of this valley are well-wooded ridges, from which beautiful and extensive views may be obtained northwards, towards the Hog's Back and the hills near Aldershot, and southwards over the broadest part of the greensand outcrop, from the Charterhouse at Godalming to the Devil's Punch Bowl and the Hampshire Hills. The rainfall of this district is very moderate; and so dry is the soil that water poured on to its surface immediately sinks out of sight. But although dry, the soil is not dusty, comparing very favourably in this respect with the chalk downs and the sandy tertiaries round London. An investigation into different sandy soils will reveal considerable differences in the proportion of calcareous particles, which increase the fertility but also the dustiness of the land. Altitude above the sea level is useful in several distinct ways in the treatment of consumptives; notably, by the effect of rarefied air on chest expansion, and by the tonic effect on digestion, blood-formation and general nutrition. While no part of England can rival the Alps in the first of these respects, the 420 feet altitude of Crooksbury Ridges is sufficient not only to dry the soil and improve the prospect, but also to give a very obvious tonic quality to the place. Nowhere in England do we find a really dry atmosphere; but extensive sandy regions, such as those which extend for miles round the Crooksbury Sanatorium, have a notable influence in diminishing atmospheric humidity. Possessing hill-slopes in every direction, the Crooksbury Sanatorium will have sheltered walks no matter what wind may blow. In very hot, still, summer weather, a northerly or an easterly slope may be of great value.

Coming next to the building: this has been planned in the simplest possible way consistent with comfort and with its intended purpose. Twelve bedrooms on one floor, all looking south, are served by a common corridor, behind the centre of which is a large dining saloon attached to the kitchen block. The situation being sheltered, there has been no need for protecting wings. The medical officer is separately accommodated in another part of the grounds. Wooden buildings not being permitted by the local authority, the Sanatorium is being substantially built in brick covered with white roughcast, with a red-tiled roof. The centre of the latter is utilised

for nurses' quarters, the rest as a boxroom. Excepting the kitchen block and the central gable, the Sanatorium is on one floor. Lavatories, bathrooms and earth closets project at each end to the north of the corridor. Water will be laid on in the lavatories and kitchen block, but not in the patients' bedrooms. Slop-water will be dealt with by immediate filtration and aeration, the effluent passing on to the land. Internally, the Sanatorium is being constructed in such a way as to be readily kept free from dust and dirt; the floors of polished boards, tongued and ploughed, the walls of washable material, all angles rounded, no projections to catch the dust. The windows have extra large casements, opening outwards and reaching to the level of the terrace; a fanlight over each. In addition to ventilation by wide-open windows, provision has been made for a large ventilating shaft above the doorway to an opening under the eaves, so that in case of need the door may be shut without interrupting the constant stream of fresh air from end to end of the room. Heating will be by hot water pipes; lighting at first by lamps and candles, until the electric installation has been completed.

The Crooksbury Sanatorium being intended for middle and upper class patients, who cannot properly be provided for by charity, and it being undesirable that such institutions should be owned by the medical officer, a small company was formed to raise the necessary funds. To ensure due attention to the medical details, the resident medical officer (Dr. F. Rufenacht Walters) has a seat on the Board; but the finances are entirely in the hands of the directors. The object of the company is primarily philanthropic; but in order to ensure stability and progress, it has been placed upon a purely business footing, although it is intended to devote the profits of the undertaking to the improvement of the Sanatorium after payment of a reasonable dividend to shareholders. The fees will be five guineas per week, with very few extras. Plans had been made for a larger building with protecting diverging wings; and one of the best sites for such future extension has been reserved higher up the hill. It need scarcely be said that a proper staff of nurses and servants will be provided, as well as a second medical officer, as soon as may be necessary. The first block will it is expected, be ready for patients early in January, 1900.

The treatment will be based for the most part on the methods adopted at Nordrach. Personal supervision by the resident medical officer; abundant digestible food, prepared by a competent cook; rest in the fresh air during febrile stages; graduated hill climbing and other exercises when the fever is past; douching and other hydropathic measures

wherever they appear to be indicated; medicinal remedies according to need. Sputa will be received into suitable receptacles, and burnt after the addition of sawdust or other absorbent. Linen will be disinfected by boiling and steaming, rooms cleansed with damp cloths, floors beeswaxed and turpentined. A special method, based upon natural agencies, will be adopted to purify the excreta. Possessing exceptional advantages in its situation and the character of its grounds, the Crooksbury Sanatorium will, it is hoped, prove to be a valuable addition to the British sanatoria already in existence.

"THE FIRS," MUNDESLEY, NORFOLK.

(Dr. Burton-Fanning.)

This is a detached house surrounded by a small garden, and was opened last June for the reception of six patients. There are three revolving shelters in the garden, and a conservatory on the south side of the house which can be opened along the whole of its southern side.

There is a resident nurse, and the patients are seen three times a week by Mr. W. J. Fanning, and Dr. Burton-Fanning visits as often as may be necessary.

"The Firs" is about ten minutes' walk from Mundesley station, and carrages can be ordered to meet patients if notice be given beforehand.

The charges are 2½ to 3½ guineas per week, including everything except personal laundry, alcohol and extra nursing if required.

Applications for admission can be made to Miss Downe, The Firs, Mundesley, Norfolk.

LINFORD.

(Dr. R. Mander Smyth.)

This house, which was the first of its kind in the British Islands specially built for carrying out the Nordrach treatment, is situated in what may be called the Hinterland of Bournemouth, sufficiently far away to be out of range of the injurious influences of a great town, while retaining the advantages of the district—gravelly subsoil, a large amount of sunshine, and moderate rainfall.

It is placed on a slope facing S.S.E., within a stone's throw of woods of pine and oak, which extend for three miles to the N.E. of the Sanatorium, and sheltered on all sides by rising ground—the elevated western moorlands of

the New Forest. The only town in the district, viz., Ringwood, is small, and two and a half miles distant, the surrounding country being practically a vast park, with few habitations or main roads.

The situation, therefore, affords the isolation from human life and traffic, the pure atmosphere and sheltered walks, which are the only climatic essentials for the treatment of the disease, and for which neither a desert nor an Alpine height is necessary.

After removal of the patient from the prejudicial home surroundings in which the illness so often commences, into this suitable environment, the treatment consists of a carefully systematised mode of life, in which an adequate and physiological diet plays a prominent part. To this is added graduated exercise, with the right proportion of rest, both mental and physical, in the open air. By these means it is sought, not only to replace the wasting caused by the disease, but to form new tissues, and so, by building up again the weakened organism and restoring the failing vital energy, to remove the susceptibility of the tissues to the inroads of the bacilli. The general health is brought into the highest possible state of vigour, so that the processes of repair in the lungs are greatly stimulated and the right way of living is formed into a habit, in order to prevent relapses on return to the ordinary conditions of life.

These results are often difficult of attainment, and can, indeed, only be accomplished by an unremitting attention to every detail that bears directly or indirectly on the patient's health, which is generally impossible at home, or in a populous health resort. Dr. Mander Smyth therefore lives in continual personal touch with those under his charge, making a careful study of each varying case, and to these ends visits each one separately three times daily. He has, moreover, himself suffered from advanced consumption, and was treated in Dr. Otto Walther's Sanatorium at Nordrach, in Baden, where he subsequently enjoyed the privilege of assisting Dr. Walther, and obtaining an experience of the best mode of treatment; moreover, it is with the advice and approval of his great German colleague that he is prepared to carry out in its integrity Dr. Walther's system, which is by far the best form of what is popularly termed the "open-air treatment."

The Sanatorium buildings have been carefully designed to avoid formation of dust or smoke, to cause patients while indoors to be practically in the open air, and to spare exertion to those in bed. Each of the patient's rooms has a hot and cold water supply laid on to the washstand and to a douche

bath. The heating is from a common centre. All bedrooms are fitted with casement windows. The lighting is electrical, the Sanatorium having its own installation. Arrangements are made for the special feeding of cows for the butter and milk supply of the Sanatorium.

The terms for board, lodging, medical attendance and medicine are £5 5s. per week, inclusive of everything except personal washing, alcoholic drinks (which can only be taken by advice), and special nursing (if necessary).

Patients' friends are only permitted to stay in exceptional circumstances, and by special arrangement.

Accounts are presented for payment weekly.

Applications for vacancies must be made in the first instance by letter to Dr. R. Mander Smyth, Linford, Ringwood, Hants. Carriages can be obtained on application, to convey patients from Ringwood Station (L.S.W.R.)

Telegrams: "Dr. Smyth, Ringwood."

MOUNT PLEASANT SANATORIUM, VENTNOR.

This Sanatorium has lately been opened for the open-air treatment of phthisis. Ventnor has long been noted as a health resort for chest affections. It satisfies all the conditions necessary for a sanatorium: (1) Its climate is equable, very bright and dry; relatively mild in winter and cool in summer, and yet bracing. (2) Its soil is absorbent, dry, warm, and well drained by a main sewer with outfall into the sea. (3) It has a full exposure of sun and sea, the sea breezes blowing right from the Atlantic, purifying the air and increasing its bracing effect. (4) It is protected from the cold north and north-easterly winds by St. Boniface Down and high hills. (5) It enjoys a larger amount of sunshine than any other place in England, as the following table (taken from the *Meterological Journal* for the years 1881-1889) will show.

	Mean.
Ventnor	1644·5
Bournemouth	1477·1
Eastbourne	1620·1
Llandudno	1219·0

(6) It has a comparatively low relative humidity. (7) Its water is pure and supplied from springs in St. Boniface Down in the north.

The Sanatorium, which stands on the undercliff facing south and south-west, is pleasantly situated in its own grounds of about two acres, about 120 feet above the sea level, commanding extensive and uninterrupted views of the sea and

the cliffs. The house is substantially built, and every room is fully exposed to the sun and sea. The lower terrace which slopes down from the main grounds overlooks the sea and affords facilities for open air shelters.

The principles of treatment are the same as at Nordrach: windows kept wide open day and night except when the occupants of the rooms are dressing and undressing; patients remain out of doors all day, some sleeping in the shelters all night. The sputa are received into Detweiller's flasks and spittoons containing disinfectant; the walls are painted with *dureseo*, a washable material. The floors are covered with linoleum and mopped daily with a damp cloth containing a a weak solution of carbolic. Three meals a day are provided, besides which the patients take about three pints of sterilised milk daily, and no alcoholic beverages are allowed, the Sanatorium being conducted on temperance principles. The medical supervision is carried on by the medical director and the resident physician and a trained nurse. There is accommodation for from eight to ten patients. Inclusive terms are 3 to 3½ guineas weekly, payable in advance. Mode of transit: trains run right through to Ventnor from Waterloo by L. & S.W. Railway, or from London Bridge by L.S.C. & B. Railway. All communications should be made to the Resident Physician, Mount Pleasant Sanatorium, Ventnor.

MUNDESLEY SANATORIUM, NORFOLK.

(Dr. Burton-Fanning.)

The Sanatorium at Mundesley, which it is expected will be ready for the reception of patients by the middle of October, 1899, is one of the first which has been specially constructed in England for the purpose of carrying out the open-air treatment of phthisis.

Mundesley has a post and telegraph office, and is a terminus of the Great Eastern, and Midland and Great Northern Railways, so that it is easily accessible from London, the Midlands, and the North. The Sanatorium is one mile distant from the railway station, and about the same distance in a direct line from the sea.

The building is situated on the southern slope of a hill, which protects it from the prevailing winds blowing from the north, north-east and north-west, while to the south there is an expanse of slightly undulating country, giving a view extending for several miles in that direction.

The soil is sandy, the sand being found to go down to a

MOUNT PLEASANT SANATORIUM, FACING LAWN AND SEA.

A SHELTER USED IN THE SANATORIUM.

great depth to the underlying chalk some 160 feet below the surface, thus assuring dryness and good drainage.

Twenty-five acres of land have been acquired, which will be suitably laid out later on.

The building itself is of wood, upon brick foundations. It consists of a ground floor, and one floor above, with accommodation for servants in attics. All the rooms for the use of patients face the south, twelve bedrooms being on the upper floor and three on the ground floor. Large dining and drawing rooms are also on the ground floor, and a corridor 8 ft. wide extends the whole length of the building on both floors, giving access to the rooms. There are large casement windows to all the rooms, which can be opened so as to admit a maximum amount of air, and over each bedroom door there is a ventilator. W.C.s are found on both floors, and w.c.s and bath rooms upstairs. Two staircases, one near each end of the building, lead to the upper floor. The floors are covered with linoleum and the inside walls with pegamoid paper, which will allow of cleansing by means of damp cloths, thus obviating the stirring up of dust by sweeping. All corners are rounded, and as far as possible no recesses have been left in which dust can accumulate. Most of the furniture has been specially designed with the same object in view, and is covered with pegamoid leather cloth, which can be daily wiped with a damp duster. A verandah extends along the whole southern part of the building, where patients can lie out on long cane chairs; and shelters, each to hold two to four patients, are provided near the house in which they can recline when the wind blows from the south. The shelters are so constructed that they will either revolve, so as to enable the occupants to get the full benefit of the air without being exposed to the wind, or else they are provided with movable shutters, which can be so arranged as to exclude the wind from whichever quarter it may blow, while one side at least is left wide open. Electric light is used for illumination throughout the building, and also in the verandah and shelters, so that patients may continue to sit out of doors after dark, thus avoiding the necessity of coming indoors until bed-time. Warming in winter will be effected by hot water apparatus with radiators in each room. In some of the rooms there are also fire-places.

Water is pumped from a deep well extending into the chalk, and is laid on all over the building.

Graduated paths are laid out by which patients can gain the shelter of a small fir wood which crowns part of the hill to the north of the building, and on this hill shelters are also provided from which glimpses of the sea can be obtained.

The patients will be under the immediate medical control of Mr. W. J. Fanning, who will reside at the Sanatorium, and Dr. Burton-Fanning will visit at least once a week. There is also a matron, who looks after the patients and superintends the housekeeping.

The weekly charges have been fixed at £5 5s.; this includes medical attendance, but does not include personal laundry, alcohol, or extra nursing if required.

Applications for admission can be made to Mr. W. J. Fanning at the Sanatorium, Mundesley, Norfolk.

Carriages are generally to be obtained at the railway station, or they will be ordered to meet patients upon their arrival if notice be sent beforehand to the Sanatorium.

NORDRACH-UPON-MENDIP.

(Drs. Thurnam and Gwynn.)

Nordrach-upon-Mendip is an institution opened for that special treatment of consumption and other diseases of the lungs which has become known in England as the "Nordrach" Cure. This treatment, introduced by Brehmer about 40 years ago, has now become associated with the name of Dr. Otto Walther, and so striking are the results obtained in the cure of consumption at the Sanatorium at Nordrach in the Black Forest, that we have opened this institution, where, in England, it is possible to carry out the Nordrach system in all its details.

The treatment is frequently spoken of as the "open-air" cure, but it is more properly known in Germany as the Sanatorium Treatment; for its application does not only consist in placing a patient in the open air. It is equally important to bring the sufferers from phthisis away from the excitements and atmospheric impurities of town life; and from the unhealthy association with a large number of invalids, and to place them in a house especially designed to promote their peace of mind and more healthy condition of body. The daily life of the patient is lived under the direction of doctors who live with them in the same building, and, having made the cure of this disease an especial study, are able to guard against those accidents which so often check progress towards health; at the same time the patients are carefully taught in what way to arrange the most minute details of their daily life, so as to ensure the observance of those conditions which are essential for cure, viz., purity of atmosphere at all moments, avoidance of undue exertion, and the assimilation of a suitable quantity of nourishing food.

We have chosen Nordrach-upon-Mendip as a spot that enables us to meet these requirements in the fullest manner. Both the members of the medical staff have themselves suffered from phthisis, and have been entirely cured at the parent institution in Germany; in addition, one of them has had the privilege of assisting Dr. Walther in the care of his patients, taking sole charge during his absence; and it is with the advice and approval of their German colleague that they are prepared to treat English patients in England in the same manner.

The house lies 862 feet above the sea level, in one of the healthiest portions of the Mendip Hills; it faces south and south-east, and is admirably protected in every necessary direction by woods and coppices of beech and fir trees. It has in the immediate neighbourhood a large number of walks, both level and ascending, through its private grounds and over undulating moorland, giving the greatest variety of direction and inclination, in addition to landscape scenery of a very beautiful order. The neighbourhood is remote from any town, and therefore entirely free from any atmospheric impurity, dust or smoke; and as the house stands in grounds of 65 acres, the utmost privacy and quietude is ensured for those patients who are unable to wander beyond them. The patients are visited three times a day in their rooms, and at each visit are directed how to spend the next few hours—either in resting in hammocks or on sofas in the nearer woods; or if able to do so, in taking walks in the surrounding country. They meet at stated hours for meals, which the greater number of them take in common, and always in the company of the doctors. Milk and other food supplies are obtained from specially chosen sources; and thus every detail of the patient's comfort is constantly under the care of the medical staff.

There is one inclusive charge, *i.e.*, £5 5s. per week, for board, lodging, medical attendance, &c., the only extras being laundry and alcoholic drinks, the latter being only taken under medical advice. Any special nurse, if required, must be provided by the patient.

Nordrach-upon-Mendip is about eight miles from either Wells or Cheddar Stations, and carriages are sent to either of these places, or to Yatton Station, twelve miles away, if ordered beforehand.

The presence of friends or relations of patients is not permitted at any time, except by the special sanction of the physicians.

All applications respecting the system of treatment followed out, or with regard to accommodation, &c., should be made

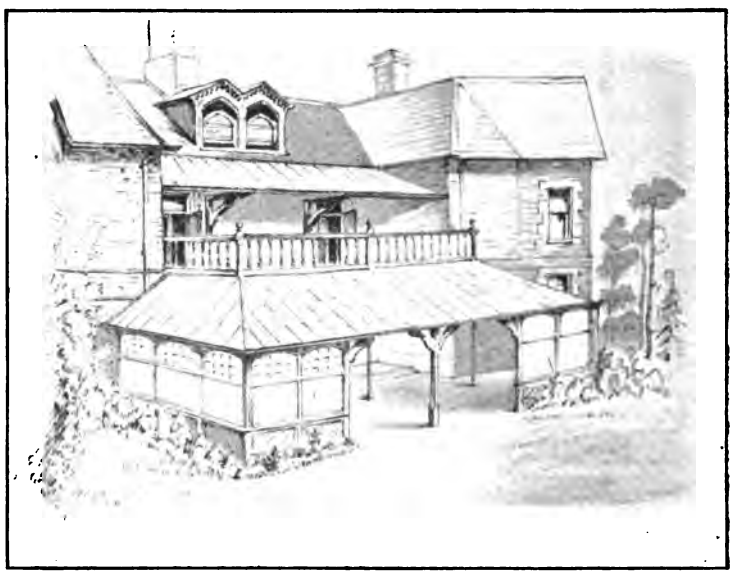
to one of the medical residents, Dr. Thurnam, or Dr. Gwynn, Nordrach-upon-Mendip, Blagdon, R.S.O., Somerset.

Telegrams: "Nordrach, Blagdon, Bristol."

OVERTON HALL, POOLE ROAD, BOURNEMOUTH.

(Drs. Francis Pott and C. Guthrie Stein.)

This Sanatorium which claims to be the first of its sort established in England, is specially arranged to receive sixteen patients. The building is in style a large villa, with a frontage of 80 ft., designed for its particular purpose, and providing a series of south rooms, for the accommodation of



View of Verandah and Balcony at Overton Hall.

the patients. The main building, which has a due south front, is built of red brick, and consists of a central block, with projecting ends.

Between the projecting ends is situate a spacious lofty verandah communicating with the lower bedrooms, and a balcony above it communicating with the upper bedrooms. The front portion of the verandah is provided with glass screens, so arranged as to offer a maximum of protection to

the invalids, at the same time that they are practically living in the open air, and not in an enclosed "hot-house" or "winter-garden."

The garden, facing the house, is devoted to "huts," or "sun-traps," or "revolving shelters," and in all cases secure rest in the open air, with privacy for those who may desire it, on the arrival of friends or visitors.

PORTABLE GARDEN HUT OR SUN-TRAP.

The ground-plan of the back of the house—the north side—corresponds to that of the south side, and consists of a central block with projecting wings. In this part of the house are located the dining room, consulting room, kitchen and offices, downstairs; and the bathrooms and quarters devoted to the matron and staff, and friends of patients, upstairs.

A leading feature of the Sanatorium is the corridor-hall, 70 ft. in length, running the whole length of the house, (with arrangements for lighting, heating and ventilation), rendering it most suitable for the use of the patients during the hour between the last meal and bed-time. This hall is provided with comfortable chairs, and lounges, and tables, and here the patients pass the evening, in conversation and reading the daily papers (morning and evening), weekly illustrated papers, magazines, &c.

The out-door life centres in the verandah, and "revolving shelters," where open air repose occupies a large share of the routine of the day.

Engaged in light occupation, feeding, or amusement; surrounded by fresh air; screened from wind; liberally supplied with warm clothing and rugs: invalids pass their days on couches, deck-chairs, or beds, and whilst learning how to get

CORRIDOR HALL.

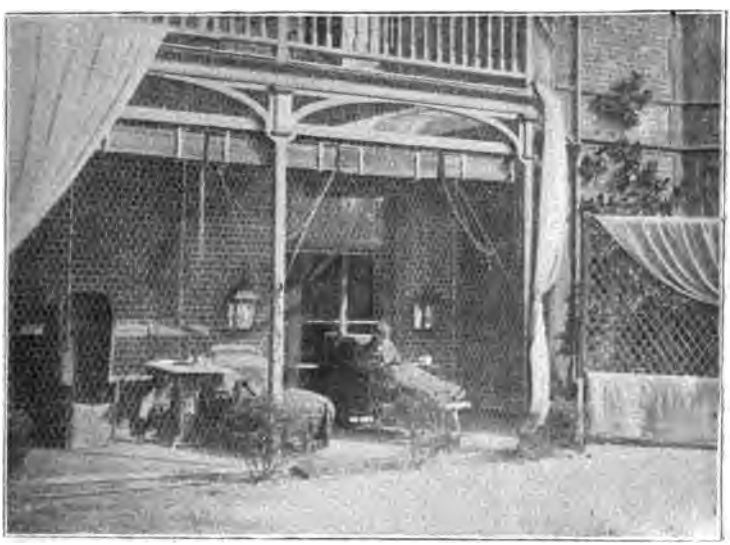
well, and keep well, time is not found to hang heavily on the hands, even of those whose powers are most restricted.

The occupants of verandah and shelters soon realise that the open air is their true home, and that the house is merely for use at night and as a receptacle for their possessions.

The furniture of the verandah includes couches, deck-chairs, and light spring bedsteads, tables and chairs for visitors.

Of indoor life the patient is encouraged to have as little as possible, but indoors our arrangements all tend for light, air and cleanliness. The walls and ceilings, devoid of cornices

and plaster-work, are covered with silicate paint, which allows of absolute cleansing with disinfectant solutions. The floors are painted a dark mahogany colour, on which the least dirt shows up; these and the paint-work of doors and windows are heavily varnished to allow of frequent cleansing. All round the room a 3-in. strip of board is nailed to the floor, which effectually prevents furniture from being pushed close to the walls, and thus space is provided for cleaning behind heavy furniture and for a free current of air. There are no fixed carpets, but rugs, each small enough to be rolled up and removed by a servant.



SHELTERED VERANDAH AND BALCONY.

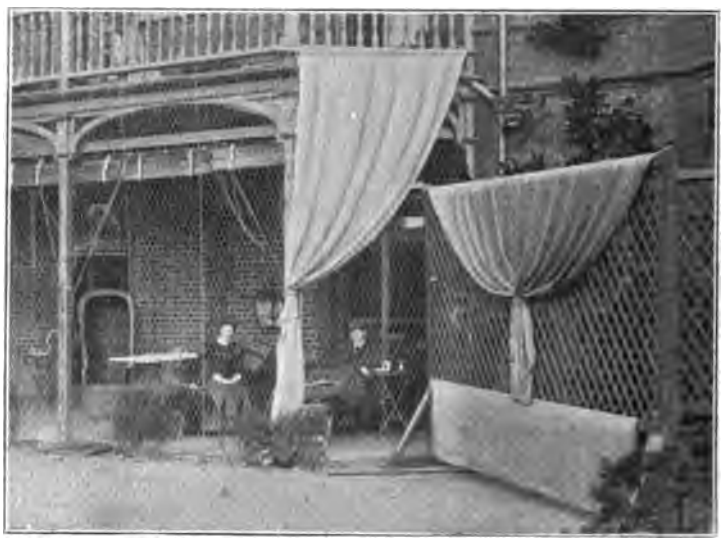
The furniture is mostly mahogany; each piece stands high from the floor, being raised if necessary on pyramidal blocks of wood, to admit of the floor being easily seen and cleansed.

The daily cleansing of floors and the cork-carpet (100 yards of noiseless surface throughout the house) is done with an instrument like a croupier's rake, which is used to push about a damp cloth, previously wrung out of a bucket of disinfectant. The gloss of the varnish is renewed by a second rub round with a flannel damped in paraffin. Good paraffin leaves no smell behind. Damp cloths take the place of all dusters.

The disposal of the sputum receives very special attention,

and presents no difficulty when once the patients have grasped the reasons for the ordering of their life, and the importance of guarding themselves and others against microbic dangers.

The "spit-flask" used is of pink glass, of four ounces capacity; a glass disc covers its mouth, and across the disc is pasted a strip of tissue paper. Before using the flask this paper must be broken, and the torn paper thus indicates that the flask has been used.



WIND-SCREENS AND TRANSLUCENT CURTAINS.

At intervals during the day a large number of freshly cleansed flasks, containing a little disinfectant solution, are distributed among the patients.

The methods of treatment pursued are those which the best continental sanatoria (such as Falkinstein, Nordrach, Göobersdorf, &c.,) have pointed out as the most successful.

The objects of the treatment are to combat the wasting and fever (which are the main features of tuberculous disease), to relieve the cough, to acclimatise the patient to the fresh air demanded by his malady, and to increase the patients' weight, and thus supply Nature with that surplus material with which to repair damages.

The chief weapons used for this purpose are: (1) good and varied food, in generous quantity; (2) fresh air throughout the

whole twenty-four hours, with protection from cold; (3) rest in the recumbent posture till all active mischief is over; (4) graduated exercise, as the patients' inprovement will allow of it; (5) drugs are only used to relieve symptoms, the kitchen being relied on as the best pharmacy.

For phthisical patients to carry out a duly regulated open-air life requires an amount of self-denial on his part, as well as a never-ceasing attention on the part of his physician,

FURNITURE WITH SPACE BEHIND AND BENEATH.

which can alone be secured by constant encouragement, skilled attendance, and an environment specially arranged for this purpose.

A phthisical patient arriving at a health resort, has not only to encounter the difficulties of finding a suitable lodging, but he may have to meet, nowadays, the scare which has arisen concerning the communicability of his disease.

At the moment when the most valuable therapy for his condition is comfortable surroundings and freedom from trouble, he may find himself involved in a thousand and one dilemmas.

The open-air treatment can be carried out as successfully in England as elsewhere.

The essentials of a dry subsoil, and shelter from wind, exist so pre-eminently in Bournemouth, which possesses a winter climate far less rigorous than other south-coast places, and a summer climate rendered delightful by the prevailing Channel breezes and a remarkably small rain-fall, that it would be difficult to select a spot more suited to the open-air treatment.

In lodgings and hotels this treatment is almost impossible.

In a house dedicated to this special purpose, where the possibility of cure is common knowledge, the invalid meets the encouragement of example, and is stimulated by the presence of promising cases.

The routine day is punctuated by meals of which the following is a sketch.

8 a.m. A glass of milk, hot or cold.

9 a.m. Breakfast: porridge, tea or coffee or cocoa, fish, eggs, bacon, kidneys, chops, sausages, grilled chicken, cold ham or tongue, jam and marmalade.

11 a.m. A glass of milk.

1 p.m. Luncheon: cold beef, mutton, lamb, chicken, hot pigeon or chicken pie, cutlets, steak pudding, sweets, jellies, fruit tarts, jam tarts, custard, tapioca, suet jam, apple dumplings; cheese, salad, fruit.

4 p.m. Afternoon tea with plenty of milk, buttered cakes, scones, buns, toast, bread and butter.

7 p.m. Dinner: soup, thick or clear, or fish, joint, poultry, game, vegetables, sweets, cheese, fruit and coffee.

9.30. Glass of milk, hot or cold, in bed-rooms.

Wines: good red wine and whisky are the stimulants generally advised.

Patients are required to bring an excess of warm loose clothing, complete woollen underwear, rugs, caps, felt-boots, &c. Evening dress is never used. It is most *un*desirable to bring old fluffy shawls, comforters, dressing-gowns, or cushions.

It is our endeavour to carry on the house as a private house, and in *no* sense as an "Institution" or "Home."

The weekly charge payable to the matron for maintenance is 5 guineas, which is absolutely inclusive of all domestic charges except personal washing and wines. The medical fee is 2 guineas per week.

An attempt to carry out this open-air treatment in patients' houses, or apartments of doubtful suitability, is as disappointing as it is costly. The Sanatorium owes its existence to the recognition of this fact.

SUNNY MOUNT SANATORIUM, STOURFIELD PARK, BOURNEMOUTH.

(DR. DENTON JOHNS.)

The open-air treatment of phthisis has been carried on by Dr. Denton Johns in Bournemouth during the last three years with marked success. The above Sanatorium, into which he has lately moved, is specially adapted to carry on the treatment with even more satisfactory results.

SUNNY MOUNT, STOURFIELD PARK, BOURNEMOUTH (*front view*).

Added to the well-known advantages of air, soil, and scenery, which have long made Bournemouth the home of the consumptive, Sunny Mount possesses a first-rate position. It stands on an eminence commanding magnificent views of the surrounding country, with ten acres of grounds sloping south-east towards the valley of the Stour. It is close to the sea, but sheltered by thick belts of pine woods.

The house is very bright and sunny, facing south-west and

north-east. Perfect ventilation is assured by casement windows occupying more than half the outer wall of the rooms; corridors open at each end, and electric fan ventilators extracting air above. Every convenience is supplied in the way of electric light, electric lift, shower and douche baths, and heating by hot water.

The patients are provided in the grounds with comfortable kiosks which open on all sides. Here their meals are served to them, and here they spend the whole of the day, except such portion as is given to the regulated exercise prescribed. The Sanatorium possesses its own laundry and disinfecting chamber. It is readily accessible, being five minutes' drive from Pokesdown Station and twenty minutes from Bournemouth Central. The terms, inclusive of medical attendance and everything required by the patient, are from four to six guineas weekly. The only extras are personal items—as washing, wine, spirits, and medicine. Forty-five patients can be received, and applications should be addressed to the Secretary, who will gladly supply any details desired.

VICTORIA HOSPITAL FOR CONSUMPTION, CRAIGLEITH, EDINBURGH.

(Dr. A. W. Philip.)

The Victoria Hospital was the first, and is apparently still the only hospital in the United Kingdom for the gratuitous treatment of consumptives strictly on the open-air principle. The outdoor department, which is situated in the heart of Edinburgh, affords a central office where patients are received and treated from day to day, and where suitable patients are selected for hospital residence. The educative value of the outdoor department has been immense. There has been recorded a relative increase in the number of early cases which present themselves, and a corresponding diminution in the frequency of hopeless ones. By daily or frequent visits to the institution patients are induced to lay aside their fear of going about, and are taught by constant reiteration the principles of the open-air system. Although the *clientèle* of this department is both very numerous and poor, it used to seem marvellous in the earlier days that untoward incidents were so infrequent of occurrence in relation to these visits to the institution in all weathers. The experience of the outdoor department has throughout afforded corroborative evidence as to the value of open-air treatment. At the same time the patients are instructed in respect of preventive

measures. For many years the following rules have been distributed at the Out-Patient Department:—

RULES FOR CONSUMPTIVE PATIENTS AND THOSE LOOKING AFTER THEM.

Consumption is a communicable disease. It may pass from person to person. It may pass from one lung to the other, or from one organ to another.

The chief source of infection is the expectoration of the consumptive. The great danger lies in the drying of the expectoration, and the blowing about of the dried infectious material.

The spread of consumption can be largely prevented. *If the succeeding directions be obeyed, there need be no serious danger in ordinary intercourse with patients. The breath of the consumptive is not directly infectious.*

The patient should expectorate into a jar or cup containing a tablespoonful of carbolic acid (1 to 20) or other disinfectant.

The vessel should be changed once in twelve hours, or oftener. It should be cleansed by being filled up with *boiling* water. The combined contents should be poured down the w.c. The vessel should then be washed with *boiling* water.

When the patient is out of doors he should carry a pocket spitting flask (such as Dettweiler's, or the Victoria Hospital simpler model). The flask should be used and cleansed like the jar. The patient should never spit on the streets.

The patient should not use handkerchiefs for expectoration. If this ever has to be done the handkerchief should be of an inexpensive material, that it may be burned after use. Squares of rag or paper, which may be used for convenience, should be similarly treated.

The expectoration should on no account be swallowed, for thereby the disease may pass to other organs.

Consumptive patients should avoid kissing.

Consumptive mothers should not suckle.

If expectoration has been accidentally deposited on the floor or other object, it should be wiped up and burned, and the surface of the object cleansed with strong antiseptic.

Rooms which have been long occupied by a consumptive patient should, before occupation by someone else, be carefully disinfected, as after other infectious disease.

FRESH AIR is the food of the lungs. Therefore, see that the lungs be not starved.

A.—By Day.—The patient should occupy as airy a room as possible. It must be scrupulously dry, and preferably removed from the ground. The window should be freely open. When able, the patient should be out of doors once or

several times during the day. He must avoid over-effort, and damp, or chill, which would counteract the benefit.

B.—By Night.—He should sleep alone. The bedroom should be large and airy. The window should be kept open, less or more according to the season.

The Hospital Proper.

The hospital proper is situated about a mile to the north-west of Edinburgh. It is placed advantageously on a gentle slope facing due south, and basks in sunshine to a remarkable extent. The present hospital was not built originally for the purpose, but is an old mansion-house which has been adapted sufficiently well. The ground, which extends to 7½ acres, includes a beautiful park and gently inclined lawns and winding paths. The grounds are sheltered, without being overshadowed, on various sides by a splendid belt of trees. The position of the grounds and trees render it possible to gain protection somewhere from every possible wind, while a couple of lawns at different levels catch all available sunshine. The present accommodation of the hospital is limited to fiteen patients, seven male and eight female, but a considerable extension is shortly expected. The climate is the climate of Edinburgh, temperate, but changeable, with a fair amount of mist and wind. There is, however, at all seasons a sufficient proportion of sunshine. The rooms of the patients are bright, with cubic capacity of approximately 1,000 cubic feet per patient (some have almost twice this amount). Heating is arranged for by open fireplaces, which serve also to assist much in the ventilation. Some of the rooms contain three patients, others two, and others, again, only one. Each room has at least one large window, which is constantly open, day and night, and the larger rooms have three windows, which afford free ventilation by a constant current of fresh air. The temperature is regulated according to thermometric reading. A thermometer is placed in each room and every passage. It is the duty of the nurse, or some one deputed by her, to watch the thermometers from hour to hour throughout the house. A uniform temperature of 60° F. is demanded. This has been found practically easy of attainment by increasing or diminishing the size of the fires. The windows have never been shut, day or night, since the hospital was opened. The air of the rooms is thus remarkably fresh, so that visitors constantly remark on the absence of stuffiness and used-upness such as even well-regulated dwelling-houses exhibit in some degree. The furniture of the room is of the simplest. The floors are plain and polished,

and the walls are coloured with distemper, which is renewed from time to time. The bedsteads have an open spring mattress, covered by a very light hair mattress, and the bed clothing is made as little as it can be, compatibly with comfort. There is a simple bedside table, made of glass and metal, which comes readily to pieces for cleansing purposes, an adaptation of the small recently introduced instrument tables. The lower shelf of this is screened by means of a thin cotton strip, which is frequently renewed. The expectoration is carefully treated along the lines which have just been indicated. No patient is allowed to expectorate within doors or outdoors save into the receptacle provided for the purpose.

The Methods of Treatment in Practice.

(1) *Free Access of Fresh Air and Sunlight into the Rooms.*—As already indicated, the rooms are bright, with one to three large windows, facing especially south. One or two of these windows in each room have never been closed since the hospital was opened. Most of the windows are provided with a closely-fitting board, 8 inches deep, which is placed within the lower part of the framework, and on which the lower edge of the lower sash rests. This allows, even in the stormiest weather, a free but gentle current of air to pass upwards between the sashes into the room. Under ordinary conditions of weather, however, the windows and doors are freely opened in addition. The windows are not allowed to be closed merely to raise the temperature within the room. This must be effected by an increase of fuel throughout the house. In practice it has been found easy in this way to obtain a uniform temperature of 60° F. The patients are thus taught, and very soon learn to fear a draught less than a stuffy atmosphere.

(2) *Out-of-door Life.*—Under ordinary conditions every patient is out of doors for a considerable portion of the day, the length of time being prescribed in individual cases just as are the diet and medicines. The more delicate patients, especially those with marked pyrexic and circulatory disturbance, are conveyed outside to reclining chairs, or the bed is carried out without disturbing the patient. Care is taken that such patients are kept sufficiently warm by suitable clothing. I have treated thus patients with considerable pleural effusion with much advantage. For other cases, walking exercise on the gently sloping paths is enjoined, with rest from time to time. During the finer weather meals are commonly taken outside.

(3) *Graduated Exercise.*—Some of the patients rest entirely

at first. The great determinant under this head is the state of the circulation. For others quiet walking exercise during regulated intervals is sufficient. This is often combined with the use of a simple retaining apparatus, whereby the shoulders are thrown backward, the elbows approximated behind, and the play of the chest, especially in its upper portion, rendered free. Other patients are allowed light dumb-bell or Indian club exercises, with the same object in view. To still stronger patients mild golfing or quoit-throwing is permitted, and to those further on, gentle cycling exercise. In addition, simple garden games of various kinds are permitted in sheltered corners, according to the direction of the wind. In the regulation of these measures the pulse is regarded as a better indicator than the stethoscope.

(4) *Clothing*.—Sufficiently warm but light clothing is prescribed. To meet this indication there is nothing better than the well-known Shetland materials. The patients are taught that, as cold has not produced their disease, so the piling on of clothes will not cure them, and is, contrariwise, distinctly harmful in most cases. Thus chest-protectors, which simply harbour dirt and foul odours, are forbidden, and the extraordinary and varied wardrobe in which the patient generally arrives is speedily simplified. The patient is taught that, just as the fresh air must be freely admitted to his lungs, so the surface of his body may be exposed to its benign influence without harm.

(5) *Bathing*.—Even the most delicate patient is sponged gently but widely, once, or preferably twice, daily. In all cases, where there is not a distinct contra-indication, the patient, after some ten days' observation, is prescribed a regular bath. This is simply a momentary dip, the temperature of the water being regulated according to the season, but always to the cool side. This has proved in my experience a great advantage, and has never been followed by the slightest accident. The bath is succeeded by rapid dry-rubbing—in more delicate cases by a nurse or attendant, and in stronger cases by the patient himself. In some instances more formal massage is practised with advantage by the nurse, and frequently oily applications—chiefly stimulating, with perhaps cod-liver oil as the basis—are applied. It is marvellous how soon unhealthily acting skins come to function properly.

(6) *Dietary*.—In most cases five meals are allowed daily. Of these, three are the more formal breakfast, dinner, and tea, while between breakfast and dinner, a cup of soup or warm milk or the like, and towards bedtime something similar is given. Milk is allowed freely throughout, and forms a large

either to start the cure or effect such amelioration that, if the patient can continue generally the same line of treatment, he does well. But in the larger group of patients it is not sufficient. The results of my experience suggest that a residence of from four to six months is desirable. Because this is meantime impossible, however, we have framed a regulation which permits likely patients to avail themselves of the benefits of the hospital *régime* by spending the day in the hospital grounds and dining with those in residence.

WOODBURN, MORNINGSIDE, EDINBURGH.
(Dr. W. P. Mears.)

This home consists of a pavilion of ten rooms. It is placed at the highest part of the locality, and stands three feet clear of the surface on sandstone rock.

The grounds, six acres in extent, are well wooded, and are protected from winds from all quarters. They slope to the south; face the Blackford, Braid, and Pentland Hills; and they abound in natural shelters. Artificial shelters are also provided. The walks, nearly a mile in length, are of varying gradients.

The open-air treatment is under the supervision of W. P. Mears, M.A., M.D.; and of Mrs. W. P. Mears, L.R.C.P.I., who devote their whole time to the personal care of the patients. Dr. R. W. Philip, F.R.C.P., is the consulting physician.

The *inclusive* charge for residence, medical attendance, &c., &c., is from 5 guineas a week, the *only extra* being for stimulants. Applications for further particulars to be made to Mrs. Mears, at the Home. Telephone, No. 34, Morningside.

Dr. Jane Walker has a Sanatorium at Boxted, near Colchester, where accommodation exists for twenty-three patients at a charge of from four to five guineas per week. Dr. Walker has been treating patients of the poorer classes on the open-air principle for the last six years in a small farmhouse at Denver, Norfolk.

Any one desiring general information upon the subject of sanatoria, should consult "Sanatoria for Consumptives; in various parts of the world," by Dr. F. Rufenacht Walters. A review of this work appears on another page.

It may be worth while to remind the members that an interesting paper on "Recent Advances in the Treatment of

Tuberculosis" was read by Dr. S. T. Pruen, before the Society in April last, which led to a valuable discussion on the open-air treatment. This paper and a full report of the discussion appeared in the July number of the JOURNAL. Among those who spoke was Dr. W. T. Gardner, of Bournemouth, who has designed a "Liegenhalle" for the open-air cure, an illustration of which will be found facing page 218 of the July issue.

TUBERCULOSIS claims annually as its victims in France about 160,000 persons.

THE North London Hospital for Consumption has just issued a report showing the results of the open-air treatment as practised there between the months of January and July of the current year. Altogether 183 patients were thus treated, and of this number 43·7 per cent. were much improved, and many of those showed no lung trouble after leaving the hospital. Improvement was less marked in 32·3 per cent. and seven of the patients died, or a mortality of 3·9 per cent. While these results are distinctly favourable it is, nevertheless, only to be supposed that they would have been better had the patients been treated in a pure atmosphere, far removed from the evil influences of a smoke-laden environment.

THE National Society for the Prevention of Tuberculosis are preparing to build a large sanatorium in Surrey, to be called the London Sanatorium.

OUR Publishers, Messrs. Bale, Sons and Danielsson, Ltd., have undertaken to publish the Sanatoria matter contained in the JOURNAL, in book form, and the reprint is certain to prove a very useful and necessary adjunct to the consulting-room of medical men generally. As the arrangements for the publication of this reprint have been placed in the hands of Messrs. Bale, we may point out that all communications respecting it should be addressed to them direct. See advertisement, page xxxiii.

Owing to great pressure on the space in this number the Library Report for the past quarter has had to be held over. —ED.

Report of Proceedings.

THE ANNUAL GENERAL MEETING.

Friday, July 14, 1899.

Dr. S. D. CLIPPINGDALE, President, in the Chair.

THE minutes of the last Annual General Meeting were read and confirmed.

The Senior HON. SECRETARY then read the Report presented by the Council for the Seventeenth Session of the Society. (See p. 337.)

On the motion of Mr. J. H. MENZIES, seconded by Mr. E. BARTLETT, it was agreed to adopt the Report as read, and to circulate it among the members of the Society.

The HON. TREASURER presented the Annual Balance Sheet, which on his motion, seconded by Mr. C. ANDREWS, was received and adopted for circulation.

The HONORARY LIBRARIAN presented his Report, which on his motion, seconded by Mr. MCADAM ECCLES, was received and adopted.

A ballot was then taken for the Officers and Council for the Session 1899—1900, and the Scrutineers, Mr. R. W. Lloyd and Dr. Leonard Mark, announced the names of those who had been duly elected. (See p. 342.) The following votes of thanks were then passed:—

The PRESIDENT, proposed by Mr. C. B. KEETLEY, seconded by Mr. MCADAM ECCLES.

The COUNCIL, proposed by Dr. T. R. ATKINSON, seconded by Mr. BRINDLEY JAMES. Mr. J. H. MENZIES replied.

The HON. TREASURER, proposed by Mr. J. H. MENZIES, seconded by Dr. G. D. ROBINSON, replied to by Mr. T. GUNTON ALDERTON.

The HON. AUDITORS, proposed by Mr. MCADAM ECCLES, seconded by Mr. T. GUNTON ALDERTON.

The HON. SECRETARIES, proposed by Mr. T. G. ALDERTON, seconded by Dr. F. H. Low, replied to by Messrs. ECCLES and ROBINSON.

The HON. LIBRARIAN, proposed by Dr. THUDICHUM, seconded by Mr. E. BARTLETT, replied to by Mr. KEETLEY.

The EDITOR OF THE JOURNAL, proposed by Mr. R. W. LLOYD, seconded by Dr. G. D. ROBINSON.

The EDITORIAL SECRETARY, proposed by Mr. C. B. KEETLEY, seconded by Mr. T. G. ALDERTON, replied to by Mr. W. MCADAM ECCLES.

The meeting then adjourned.

The Mirror of Practice.

A CASE OF CHRONIC OBSTRUCTION DUE TO A KINK IN THE COLON—OPERATION—CURE.

By F. Swinford Edwards, F.R.C.S.,
Surgeon to the West London Hospital, &c.

Miss X., aged 29, came to see me about a year ago, complaining of abdominal pain and much difficulty in obtaining an action of the bowels.

She gave the following history:—Thirteen years ago, when in the West Indies, she was laid up with a bad attack of dysentery. Ever since she has had much trouble with the bowels, and from time to time she has passed both blood and mucus. Some months ago, she consulted a surgeon in London who finding she had piles, removed them by Whitehead's method. From this she made a good recovery, but it did not relieve the symptoms from which she was suffering, viz., abdominal pain and tenderness, and the greatest difficulty, in spite of a variety of aperient medicines and enemata, in obtaining an action of the bowels. She begged him to do something further in the nature of an abdominal exploratory operation, but this he refused, believing, I am told, that her symptoms were neurotic.

At this time, in order to obtain an action of the bowels, she was obliged to take no less than ʒvi. of ol. ricini at a dose.

I made a careful examination of the whole length of the rectum and lower sigmoid by means of Kelly's tubes, the patient being in the genu-pectoral position; but although I was able to obtain a clear view of the whole of this portion of the gut with the electric light, I discovered nothing abnormal.

An enema of two quarts of fluid returned unaltered without producing an action.

Miss X. stated that she was convinced that the trouble was situated in the left lumbar region, viz., at about the junction of the descending colon with the sigmoid, where she felt the motion lodge, and at which point she had tenderness on pressure, but no tumour nor induration was to be felt. As she was unable at this time to undergo an operation owing to domestic circumstances, I prescribed the following pill, viz., ℞. strychniæ gr. ½, pil. col. co., gr. xxx. Ft. pil. xxx., and told her to call again as soon as she was prepared to undergo the exploratory operation, which I strongly advised. The diagnosis which I made was one of stricture of the colon, due to cicatrical con-

traction of former dysenteric ulceration, or of adhesions binding down the bowel.

After the lapse of over six months, she came to see me again when matters had got worse. It was necessary now for her to take no less than 22 ozs. of castor oil for a dose, which she did twice a week, so that her life was spent in taking the oil and in getting rid of it.

As life was, under these conditions, a burden, she was prepared to submit to anything, even to a colotomy, should I find it necessary to perform one. Accordingly, on June 17, the patient was placed under ether by Mr. Braine. Mr. Propert, an old friend and medical attendant of hers, who had strongly advised operation, was present.

Assisted by my friend and colleague, Mr. Bidwell, I made an incision about the level of the umbilicus in the left linea semilunalis. On exposing the colon we found it kinked and bound down by adhesions. At first sight it appeared strictured, but after freeing the adhesions I was able to pull it out and convince myself that the lumen of the gut was not narrowed. All bleeding points having been ligatured, the abdominal wound was sutured in layers. No drainage tube was used. That evening the patient was given morphia, one-sixth of a grain.

On the following day there was a little vomiting, with some abdominal distension, but no great rise of the temperature. Bismuth and soda mixture with "alcohol de menthe" were ordered.

Early the following morning she was very sick and brought up a considerable quantity of a thin, clear, and bright green fluid. She had passed much flatus *per rectum*.

On the 20th I ordered ℥ss. doses of mist. alba. every three hours and a simple enema, which was followed by an action of the bowels. A hypodermic of strychnine gr. $\frac{1}{60}$ was given.

On the 21st the patient had another action and felt very comfortable. The wound was dressed and found to be completely united.

I saw the patient in August when she was feeling and looking much better. She still has to take a little aperient, but finds that ʒss. of ol. ricini is now sufficient to ensure a good action. She says that her health is better than it has been for years. At times she feels a little pricking in the neighbourhood of the wound which, though getting less, serves to remind her of her former trouble.

I thought this case worthy of record on two grounds; in the first place as showing what an immense amount of discomfort, not to say suffering, adhesions in connection with

the bowel may cause and how easily relief may be obtained by surgical interference. In the second place, as indicating that even the best of us is liable to err, for in this case a surgeon of high standing (who I believe is by no means backward in opening the belly) not only refused to do an exploratory operation himself, but tried to dissuade the patient from permitting any other surgeon from doing it.

I might mention that had I found a simple stricture I should have divided it longitudinally and sutured transversely, as is done in pyloroplasty.

A CASE OF HERNIA OF MECKEL'S DIVERTICULUM.

By W. McAdam Eccles, M.S.(Lond.), F.R.C.S.(Eng.).

Assistant Surgeon to the West London Hospital, and to the City of London Truss Society.

The rarity of this viscus being the sole contents of a hernial sac, prompts me to put the following case on record.

A boy aged 13 years was sent by Mr. E. W. Lewis into the West London Hospital under my care on May 27, 1898, with the history that for the past three years he had had a reducible right inguinal hernia. For this a truss had never been worn, and the protrusion had given him but little trouble.

On the morning of May 26, soon after rising from bed, the patient had a considerable amount of pain in the right groin, radiating to the abdomen and back. He had nausea, and vomited three times during the day, but passed some flatus, though no fæcal matter. In the evening the hernia was found to be irreducible, and was not returned by taxis. During the night, however, it is said to have spontaneously disappeared.

On the morning of May 27, the boy went to school as usual, but in the early afternoon he was again seized with pain in the hernial region and the abdominal cavity. He returned home, and passed some wind on arrival there, but no motion. He was again sick, and the pain grew worse. He was then seen by Mr. Lewis, who did not employ taxis, but sent him into the hospital immediately.

On admission the patient had a good colour, his face did not present the characteristic appearance of acute abdominal disturbance, and his pulse was regular and strong. The abdomen was slightly distended, and everywhere somewhat tender. In the right inguinal region there was a hard, tense, very painful swelling, which extended into the upper part of

the scrotum. Both testes were above the limits of the scrotum proper, though they were apparently rather drawn up than undescended. There was much muscular spasm on handling the tumour. There was no vomiting after admission, and urine was voided naturally, though neither flatus nor fæces passed.

The patient was placed in a hot bath for the period of ten minutes, and was then wrapped in blankets, and when thoroughly warm, taxis was employed. This was continued for about three minutes, with the result that the swelling became less tense, but still remained easily visible, and was very tender, and the muscular spasm persisted.

When I examined the boy some two hours later he had still the tumour present, and so I determined that the right course of treatment was to explore the hernial sac. He was therefore placed under the influence of an anæsthetic, and the parts well cleansed. An incision was made in the usual position and the tissues divided down to the sac wall, the retracted testis appearing at the lower part of the wound. The sac was opened and found to contain a quantity of dark, blood-stained fluid, and a piece of omentum presented. When this was drawn aside it was seen that there was in addition a portion of bowel, in the form of a blind tube some 1½ inches long, and about the size, in its circumference, of the index finger of an adult, lying in the sac in the upper part of the inguinal canal. Its walls were congested but not thickened. Its extremity was slightly dilated, and there was no suggestion of a mesentery. At the site of the deep ring there was a distinct constriction and a few fine adhesions. Seeing that the gut ended in a *cul-de-sac*, the herniated portion was considered to be either the vermiform appendix greatly distended, or a Meckel's diverticulum. The latter was thought to be the more likely, seeing the size of the calibre of the tube, the thinness of its walls, and the fact that no meso-appendix could be discovered. The slight stricture at the deep ring was divided, and the bowel drawn further down, when the junction of the diverticulum with the ileum at about another inch higher up was plainly seen. The protruded portion of intestine was returned to the abdomen, it not being deemed necessary or advisable that it should be excised. The tag of omentum which was down was transfixed and removed. The usual radical treatment of the sac and canal was carried out, the testis being drawn down as far as possible into the scrotum. The patient made an uninterrupted recovery, the bowels being opened after a small dose of senna on June 3.

This is a typical case of Littre's hernia, and as such presents some very interesting points worthy of notice.

It will be seen that the symptoms produced by the nipping of the diverticulum in the hernial sac, were to a certain extent those of an ordinary strangulated hernia in which there is constriction of bowel, and thus intestinal obstruction. But while it presented some of these characteristic symptoms, yet they were not well marked, and some wanting altogether. The boy had vomiting, but it was not severe nor persistent, and he had no complete constipation, for flatus was passed, although fæces were not. There was no sign of collapse, and abdominal distension was but slight. Strangulation of a Meckel's diverticulum resembles in its train of symptoms the cases in which another diverticulum—the vermiform appendix—is caught in a hernial sac, and those in which only a portion of the wall of a piece of gut is strangled at the mouth of a sac—a true Richter's hernia. In none of these is there true intestinal obstruction.

There is, moreover, another condition which may lead to symptoms of a somewhat similar nature, and this is where omentum alone is nipped in the neck of a hernial protrusion. In all four conditions the signs and symptoms may not be so well marked as to lead a surgeon to be certain of the existence of a true strangulated hernia, but each will inevitably tend to a serious termination, and in my opinion they all call for immediate exploration by herniotomy, followed by liberation and return of the imprisoned bowel, provided that it is in such a state that it will recover, or removal of the protruded portion of the omentum.

A CASE OF CATARACT EXTRACTION IN A PATIENT AFFECTED WITH NEURO-RETINITIS.

By Arthur W. Wheatley, M.B., M.R.C.S.

Senior Surgeon, Western Ophthalmic Hospital.

The success of an operation for cataract is occasionally marred by some morbid condition of the optic nerve or media, and when such is known to have existed at some time prior to the lens opacity serious doubts are apt to be entertained as to the result of any contemplated operative interference.

The conditions present may, however, be such as to fully warrant active measures, particularly when the eye involved is the sole one that has been used for practical purposes of vision for a period of many years prior to the formation of the cataract.

The following is a case in point, and it illustrates the fact that favourable results may sometimes be obtained in unpromising cases.

The patient (a lady) first came under my observation in February, 1885. She was then forty years of age and gave the following history. She stated that ten years previously she had suffered from acute inflammation of the left eye and that the vision of it was then lost. (The disease was probably plastic iritis, for almost everywhere the iris was adherent, and what remained of pupillary area was occluded by lymph.)

During the years that had subsequently passed she had consequently depended on the right eye solely, but the rapid failure of the sight of this latter had compelled her to give up her occupation, and she sought advice as she feared total blindness. Her general health had usually been good, but she had at times suffered from symptoms of a gouty or rheumatic character.

On examination it was found that the distant vision of the right eye was reduced to the perception only of the largest letters of test type ($\frac{6}{60}$), and the near vision only equalled No. 16 Jaeger—while in the left eye there was bare perception of light. Glasses did not improve vision, the defective sight being due to neuro-retinitis revealed on ophthalmoscopic examination.

For two or three years following she remained under observation, and mainly under treatment, with little apparent benefit so far as sight was concerned. Mercurials, iodides, salicylates and alkalies were used in turn, either separately or in combination, but with equally disappointing results. An effort was made to influence beneficially the nutrition of the right eye by an iridectomy on the *left*, but no improvement followed. Subsequently an iridectomy was done on the right, but with no more satisfactory result, and the best that could be said was that the condition did not retrogress.

In 1888—that is after the patient had been under treatment three years—it was decided to extract the lens of the left eye, in the hope that some useful vision might yet be restored to it. A violent attack of iritis, however, followed and marred the success of the operation.

For some years the patient was lost sight of, but in 1895 she again applied for relief, and she was then totally blind, the lens of the right eye having become opaque in the interval. The cataract was mature, but the iris was adherent at its lower border. I had grave misgivings as to the result of interference, but I was induced to make the attempt, and under cocaine I extracted the lens, and the case gave me no further trouble save the division of some filmy opacities a few weeks later. Subsequently she was supplied with suitable glasses, and from this time onward has been able to conduct her own affairs, her vision for near and distant objects having

far exceeded her hopes or expectations. Examining her two years after the operation (January, 1898) I found that she could read No. 1 Jaeger at 12 inches with + 18 D and could see $\frac{6}{6}$ with + 13 D.

It is beyond my power to say to what cause this favourable result, as regards the neuritis, was due. I believe that the drugs used exercised a retarding influence in the acute stage, and the iridectomies performed were probably of value at this stage also. It is probable, however, that the menopause had ultimately a more direct influence, and that even the sheltering effect of a nebulous lens may have aided in the restoration of the congested nerve tissue.

Reviews and Notices of Books.

MANSELL MOULLIN ON ENLARGEMENT OF THE PROSTATE.[1]

It is with pleasure that we review the second edition of this work. The author has right to be heard as an authority on the subject, and his experience in the matter since the publication of the first edition and the deductions that he draws from it are of value to the whole of the surgical world. In the preface of the former issue, Mr. Mansell Moullin stated that he was aware that in many respects the conclusions that he had come to and had ventured to express, differed materially from those current at the time, and we have looked with interest to see whether the same have been supported by the subsequent history of individual patients, and by the practice of other surgeons. In the present volume much of the descriptive matter of operations, the practical value of which has not been established, has been omitted, and we think wisely; but all that is retained which the author avers from his own observation to be of actual value. He further lays down the very confident dictum that "there is no case of enlargement in which perfect relief cannot be obtained, provided only the secondary consequences which so often and so entirely unnecessarily follow it, and which are due in the vast majority of instances to the careless use of catheters, have not been allowed to work irreparable harm upon the walls of

[1] "Enlargement of the Prostate," by C. W. Mansell Moullin, M.D., F.R.C.S., Surgeon to, and Lecturer on, Surgery at the London Hospital, &c. Second Edition. London: H. K. Lewis, 1899.

the bladder." While the greater number of surgeons will readily admit that much damage may result to the vesical tissues as the outcome of improper catheterisation, yet we fear that fewer will be so confident as to agree that there is no case of prostatic enlargement which cannot be absolutely relieved.

Very good accounts are given of supra-pubic and of perineal prostatectomy, and on the whole one or other of these operative procedures would seem to be the best established for the radical relief of the enlargement of the prostate so common after middle life. Mr. Moullin reviews clearly the present status of orchidectomy and of division of the various structures of the spermatic cord in relation to their effect upon the enlarged prostate.

There is no doubt but that considerable advance has been made in this branch of surgery, and with increasing attention to the details of the *technique* of the operative procedures the resulting success is greatly enhanced.

KINGSCOTE ON ASTHMA.[1]

AFTER a careful perusal of this book, we cannot convince ourselves that it is scientifically accurate or that the theories enunciated therein will bear strict investigation. The work commences with a description of a novel form of pleximeter, by which it is supposed that a more definite and precise limitation of cardiac dulness can be obtained. The author asserts that by his invention of a new cone-shaped pleximeter (which is placed over the cardiac area and struck sharply with a drum-stick shaped hammer) the dull note of the viscus is produced which is immediately under the cone part of the instrument, the extraneous fibres in the chest being shut off or insulated, as it were, by the rubber ring which surrounds the pleximeter. But, is this so? In our hands we have found by the simple expedient of rubbing ink or ordinary black lead on the under surface of the pleximeter that the cone does not always impinge on the chest wall, and that the vibratory note which is produced by the forcible percussion emanates from the rubber circumference — just the very opposite phenomenon which the author wishes to produce. Further, the fact is overlooked that in this pleximeter the sense of resistance or solidarity (which is a most valuable

[1] "Asthma; Recent Developments in its Treatment," by Ernest Kingscote, M.B., C.M., L.R.C.S.Edin.; Fellow of the Medical Society of London. London: Henry J. Glaisher, 1899.

sign) of any underlying organ is entirely lost to the hands of the percussor. All this, however, is a matter of detail, and possibly in Dr. Kingscote's hands the results are better than we were able to obtain.

Nor in the more theoretical parts of the work are we in accord with the author. Dr. Kingscote endeavours to prove that asthma may be due in many cases to cardiac dilatation which, by pressing on the vagi nerves, so acts as an irritant or stimulus of these nerve tracts. We cannot satisfy ourselves that this idea is more than fanciful; and although the author read a paper before the Medical Society of London in which this theory was enunciated, he failed, we think, to convince his audience. For him, cardiac enlargement is in most cases a primary cause and asthma a secondary result, but he apparently ignores those cases of true asthma in which there is no cardiac dilatation or in which there is even cardiac atrophy. Nor does he convince us that his idea is a correct one when he surmises that in some cases of cardiac dilatation which escape spasmodic spasm, the dilated heart overlaps the vertebral column like a saddle bag and so exerts no pressure effects on the vagi. This theory must perforce apply to the left ventricle, which alone is on the vertebral column, and to imagine that dilatation of the systemic ventricle is a frequent cause of asthma is to us a novel suggestion. Much as we should wish to give a favourable review of this work, we fear that the author's views are as yet fanciful only and founded neither on anatomical research nor on a true physiological basis.

WALTERS ON SANATORIA FOR CONSUMPTIVES.[1]

THE appearance of this important work was most opportune, coming as it did when medical and public attention had been very widely drawn to the prevention and curative treatment of phthisis, by the publication of the excellent results obtained in German Sanatoria and by the propaganda of the Association for the Prevention of Tuberculosis. Its contents may be conveniently classified under two heads. The first sixteen chapters deal with the general principles of the treatment of consumptives in sanatoria, and practical details relating

[1] "Sanatoria for Consumptives in various Parts of the World." A critical and detailed description, together with an exposition of the open-air or hygienic treatment of phthisis, by F. R. Walters, M.D. London: Swan Sonnenschein & Co, 1899.

thereto, while the remaining thirty-two chapters contain elaborate descriptions of sanatoria in various parts of the world. The scope of the first part may be gathered from some of the more important chapter-headings, which are as follows: Climates for Consumptives, Treatment in Home Climates, Outlines of Treatment, Sites, Grounds, Construction and Furniture, Cleansing and Disinfection, Fresh-Air Treatment, Rest and Exercise, Diet, Sanatoria for the Poor and for Children, Results of Sanatorium Treatment, Staff and Management, Objections Answered, Cost of a Sanatorium.

In the second part are descriptions with plans and elevations of sanatoria in France, Germany, Norway, Russia, Switzerland, the United States and British possessions.

A careful study of the work enables us to say that it is most thorough and exact, precise in detail, and thoroughly sound in the methods which are advocated. It will be invaluable to all who require exact information on any of the points named above, whether from the patient's or the physician's standpoint. The value of the work is further enhanced by an introduction by Sir Douglas Powell.

Books Received.

Atlas of Urinary Sediments, with special reference to their Clinical Significance, by Dr. Hermann Rieder, of the University of Munich. Translated by F. C. Moore, M.Sc., M.D.Vict. Assistant Lecturer and Demonstrator of Pathology, Owens College. Edited and Annotated by A. Sheridan Delépine, M.B., C.M.Edin., B.Sc. Professor of Pathology in Owens College and Victoria University, Manchester. With thirty-six plates, comprising 167 figures, many in colours, and several figures in the text. London: Charles Griffin and Co., Limited, 1899.

Constipation and its Modern Treatment, by George Herschell, M.D.Lond. Second Edition. London: Henry J. Glaisher, 1899.

Extra-Uterine Pregnancy, a Clinical and Operative Study, by John W. Taylor, F.R.C.S.Eng. Senior In-Patient Surgeon to the Birmingham and Midland Hospital for Women, &c., with 65 illustrations and diagrams, mostly original. London: H. K. Lewis, 1899.

Enlargement of the Prostate, its Treatment and Radical Cure, including the Hunterian Lectures. By C. W. Mansell Moullin, M.D.Oxon., F.R.C.S. Second Edition. London: H. K. Lewis, 1899.

Asthma: Recent Developments in its Treatment, by Ernest Kingscote, M.B., C.M., L.R.C.S.Edin., with coloured frontispiece and illustrations, pp. 184. London: Henry J. Glaisher, 1899.

Surgical Instruments. Twentieth Century Edition. London: Down Brothers, 1899.

NOTES ON NEW PREPARATIONS, &c.

"Tabloid" Effervescent Mineral Water Salts — Burroughs, Wellcome & Co. — This enterprising firm have produced tabloids of artificial mineral waters, representing the best known waters in common use. Among these we have examined and can report upon "Tabloid" Carlsbad Water, and find that one of the tabloids in two ounces of water represents an equal volume of Carlsbad Sprudel Water, with all its essential constituents, and all its special virtues. They form an excellent "before-breakfast" laxative, and their compactness and ease of carriage renders them invaluable to travellers and others. "Tabloid" Vichy Mineral Water is again an exceedingly satisfactory preparation, making by the solution of one in two ounces of water, an equal quantity of similar water to that of the Grand Grille Spring. In addition to the two that we have mentioned, the firm supply "Tabloids" of Kissingen Mineral Water, Seltzer Mineral Water, and Vichy Salt with Lithium. We can fully recommend these most convenient and effective articles.

"Tabloid" Effervescent Caffeine Citrate.—The same firm have submitted to us samples of their new effervescent "Tabloids." These include a large number of the B.P. 1898 formulæ, and will be found to be very suitable for administration, being easily and rapidly soluble, accurate as to the quantity included, and of great purity. We need only indicate some of the more important and useful of these tabloids. Manesium sulphate, piperazine, sodium phosphate, sodium salicylate, sodium sulphate, in addition to the one that appears at the heading of this notice.

Laxative Tabloids.—Tabloids of cascara, colocynth, aloes and iron, are among the recent tabloids that we have received from Messrs. Burroughs, Wellcome & Co., and we have satisfied ourselves of their worth and utility.

It is essential to have active, pure, and stable preparations of drugs, and we believe that in these tabloids perfection has

been almost, if not quite, attained. The "Tabloid" Cascara is made in two new strengths, viz., of one grain, and of three grains of the dry extract, and they should become very popular when their administration is advised by the medical man.

"Soloid" Products.—Messrs. Burroughs & Wellcome are extending their series of "soloid" products, and we welcome two that are sure to have much favour with medical practitioners. These are the soloids of subacetate of lead, and the same combined with opium. By the introduction of the former, it is easy to carry in a solid form, the material necessary for the immediate preparation of "Goulard Water." One of the soloids dissolved in a quarter of a pint of water yields a solution that contains almost the same quantity of the lead subacetate as does the official liq. plumbi subacetatis dilutus. Probably also this soloid may tend to prevent the disastrous mistakes that have occurred from the presence of a considerable amount of the solution being present in a room, for by means of the soloid a fresh quantity of the water can be made on each occasion that it is required, and merely that amount which is necessary need be prepared.

The lead and opium soloid is equally useful, for with it is a trustworthy solution of the acetate of lead and the tincture of opium can be rapidly and readily obtained. We are sure that these two soloids will be of much service to the general practitioner.

"Soloid" Saline Solution.—The same firm have had prepared three forms of Saline Solution "Soloids," in order to meet the necessity of being able to easily prepare a solution for the intra-venous injection of a fluid to restore the blood pressure in cases of severe hæmorrhage. These should be of great service to the obstetrician, as well as to the surgeon.

The three varieties are simple sodium chloride, gr. 30, sodium chloride with sodium sulphate, of each gr. 15, and a compound soloid of the chloride, sulphate, carbonate, and phosphate of sodium, together with a certain quantity of potassium chloride. These are supplied in tubes, each containing six, and the solution of two in a pint of sterilized water at a temperature of 100° F., forms an injection of the proper strength.

"Soloid" Microscopic Stains.—The tendency of solutions of the aniline dyes to decompose has always been a source of trouble in microscopic work. The introduction of "Soloid" Microscopic Stains enables such solutions to be prepared in small quantities when required. Messrs. Burroughs, Wellcome and Co. have prepared several soloids, and we have

tested those of Gentian Violet, Methylene Blue, Eosin, Bismarck Brown and Fuchsine. All appear equally efficient and satisfactory, but we would particularly refer to the fuchsine, for by its employment every practitioner should be able readily to determine the presence of the tubercle bacillus. One soloid product of fuchsine should be thoroughly powdered in half a drachm of absolute alcohol, and have added to it two drachms of 5 per. cent. aqueous solution of carbolic acid. The product is to be well filtered before use.

Chocolate Coated Tablets—Parke, Davis & Co.—There are undoubtedly two considerable advantages secured by the coating of medicinal substances, when put up in the form of tablets, with chocolate. These are the fact that they thereby become very palatable, and because the coating will act as a very efficient protection to the risk of change of the drug from its exposure to air, light, heat, &c. Messrs. Parke, Davis & Co. have prepared a considerable number—over one hundred —formulæ with this coating, and we feel sure that such will do much to render the tablets and tablet triturates agreeable alike to both doctor and patient. We would recommend that samples be obtained from the manufacturers and tested by each medical man who is interested in the matter of the elegant preparation of drugs.

Globules of **Saw Palmetto** and **Santal Oil.**—The same firm have put on the market some very convenient globules containing the therapeutically active oils from one drachm of fresh ripe Saw Palmetto fruit combined with three minims of pure Santal oil. These globules are used with considerable effect in the treatment of specific urethritis.

Blenostatic Pills.—These contain three grains of the dihydrobromate of cinchonidine, and will be found of great service in the treatment of acute catarrh of all parts of the respiratory tract.

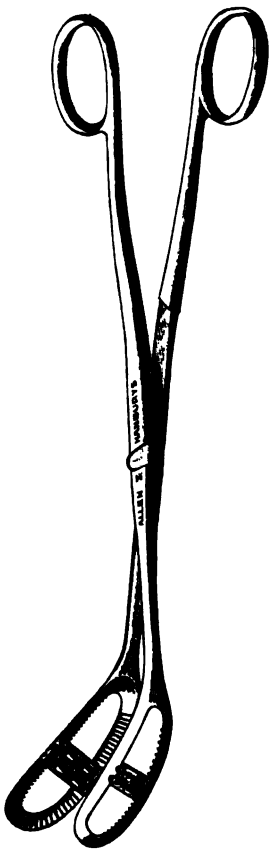
Globules of **Colchicine** combined with **Methyl Salicylate.**—These contain the two drugs which in combination has of late been found to possess a beneficial influence in cases of chorea.

Saline Solution.—Messrs. Parke, Davis & Co. have also prepared, at the suggestion of Dr. F. S. Locke, a concentrated Saline Solution, put up in small bottles so that the contents of one diluted with sterilised water at the temperature of 100° F. to make a quantity equal to a litre of solution, gives the correct fluid for intra-venous injection in cases of excessive hæmorrhage.

"Allenburys" Toilet Soap—Allen & Hanburys, Ltd.—We have received a sample of this toilet soap, and have sub-

mitted the same to chemical and practical tests. It fulfils in our opinion the desirabilities of a soap which is suitable for the toilet. It is a milled soap, perfectly smooth, with a pleasing perfume, not too strong, but of sufficient definiteness to leave a right amount of scent behind on the skin. It lathers rapidly and freely, and has no tendency whatever to produce any roughness of the hands. The manufacturers assure us that there is no other heat used in its production, save that which is necessary for the preparation of the basis. We believe that this soap will become increasingly popular, and that it will meet all the expectations that are sought of it.

Improved Ovum Forceps—Allen & Hanburys, Ltd.—The ordinary Ovum Forceps are well known, having a pair of blades which meet at a point at the end, the only place at which they are in contact, and the theory of their action seems to be that the egg-shaped ovum will fall into the oval aperture of the blades, and lying there, be easily extracted. As a matter of fact this very seldom, if ever, happens.



Often enough with the older pattern, the ovum is torn while it is being extracted, and then a portion being left behind, will not be removed with the forceps. In the present forceps which is the subject of this notice, this well-recognised objection has, it is believed, been completely done away with. The edges of the blades, while preserving the general curve and shape of the original forceps, have been bevelled so as to do as little injury to the uterine mucosa as possible. After their first introduction the blades are to be opened and moved in the direction of the attached placental tissue, which can so frequently be touched but not detached by the forefinger. With the opened blades, the ovum can be grasped and drawn out of the cavity of the uterus with very little danger of its rupture.

The forceps are made with the usual detachable joint, and appear to possess distinct advantages over the more common form in use.

Esvach Water — Davy, Hill & Son, Yates & Hicks.—We have received from this firm a sample of this water, which has properties which, we venture to think, is not possessed to the same degree in any aperient water that is before the profession. Its taste is not by any means the nauseous one that is so often to be found in these natural waters. It contains no lime salts, but has 3·9 per cent of aperient sulphates, together with the welcome addition of 0·96 per cent of bicarbonate of sodium. There is also a slight amount of free carbonic acid gas, which gives the water its almost pleasant taste. The dose of the aperient is two ounces for an adult, and should be taken on rising in the morning, when it will be found that it will produce a good action without any annoying after effects. It is put up in screw-stoppered bottles, and it can be thus kept fresh, and is easily carried about. We confidently expect a wide use of this water.

Jaeger's Sanitary Woollen Clothing.—One of the great principles in the treatment of phthisis is the exposure of the sufferer to the effects of the open air, and preferably that of high altitudes. Nor is this residence out of doors to be confined to the summer months, nor to the sunny days, but should also extend to the winter season, and dull, rainy hours, and at night as well as day.

Naturally, therefore, the protection of the patient thus treated from cold is of the utmost moment. No one must feel chilly, and although the shelters may be provided with hot water apparatus and protected by screens from the wind, yet it is the bodily clothing and the superimposed wraps that must chiefly be depended upon to maintain a suitable temperature of the tissues. Moreover, it is desirable that all the garments which are worn should be light and porous. Heavy clothing becomes a weariness to the patient, and failure of its texture to allow the excretions of the skin to rapidly disperse is very disadvantageous. We believe that Jaeger's woollen clothing meets the want that phthisical persons feel, in a manner which cannot be surpassed. It is warm, light and porous. It is, moreover, suitable for almost every article of attire, and will be found to wear well. We can confidently recommend it for all, and as we have pointed out, we consider it one of the most satisfactory of materials wherewith to clothe those who are undergoing the open-air treatment for tuberculosis.

The M. C. Saddle Pin.—This pin has the horizontal part movable instead of fixed. The result is to permit the saddle to oscillate from side to side, descending on the side of the leg which is itself descending at the moment. The movement is confined by stops within moderate limits. The pin is well made, neat and smart in appearance.

We have given it an extensive trial in the past months in connection with Christie's saddle and with Henson's. We found the almost painfully hard seat of the former made quite bearable, owing to the way in which the oscillating pin keeps shifting the seat of pressure. With regard to Henson's saddle, we had previously found that each stroke on the pedal prized the ischium of the corresponding side off the saddle, unless the saddle was sloped forward at an uncomfortable angle, and this, however much the saddle might be set back. The use of the oscillating saddle does away with the objectionable prizing up of the buttock, as it permits first one side and then the other to assume a downward slope. In short, the combination of the M. C. saddle pin with Henson's saddle, is the most comfortable arrangement we have as yet met with.

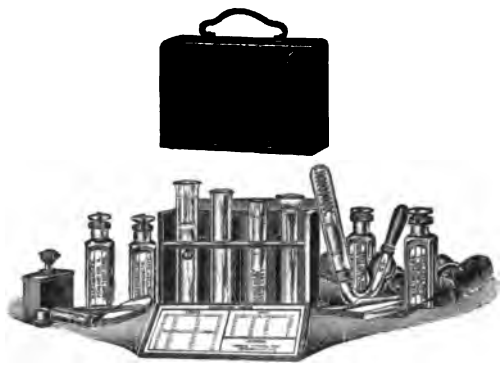
When this pin is first used there is a feeling of insecurity which might be a source of danger in a crowded street or a "tight corner," but this gradually wears off. With practice one feels as secure on the movable as on a fixed pin. At the same time it is not suitable for beginners or, indeed, in London traffic, for riders who have not accustomed themselves to it. It is made by Messrs. Crowsley and Co., of Victoria Street.

"Shell Brand" Floor Polish—A. H. Hamilton & Co.—It is very desirable that the surface of the floors of institutions of the character of hospitals and sanatoria should be kept highly polished. It is in this way that dust is prevented from adhering, and liquids from permeating.

Having tested the "shell-brand" floor polish, we have no hesitation in recommending it for this purpose. It is easy to work, gives a good polish, and a little of it goes a long way.

Urine Testing Case—W. Martindale.—It is of the utmost importance that the examination of the urine should not be neglected at the bedside. Much difficulty has been experienced by many from the want of a compact, and yet complete, apparatus that could be easily carried by the medical practitioner on his rounds. W. Harrison Martindale has sought to remedy this need by the introduction of a very handy, and at the same time thoroughly efficient, test case. It consists of a mahogany cabinet, 6in. by 2½in. by 4in., thus taking up the minimum of space. It contains all the requisites for an immediate examination of the urine. The completeness of the case will be recognised by the enumeration of the various articles that are packed away in it. These are: Albuminometer (Esbach's), graduated tube for glucose determination, ureometer for urea determination, urinometer for reading off specific gravity, metal spirit lamp with brass screw top, three test tubes, test tube stand, test tube brush,

four stoppered bottles of reagents fitted with patent safety stopper bands, funnel, graduated pipette, litmus papers, filter papers, cloth, calculation tables, and book of directions and charts.



The price is so moderate that we feel sure that the case will be in the hands of a large number of medical men who have not as yet purchased it.

Cod Liver Oil Extract.—Wampole & Co.—The liver of the cod, when fresh, contains certain alkaloids, besides other active medicinal principles. But the oil which is obtained is apt to be disliked by patients on account of its nauseating taste. It has therefore been the endeavour of Mr. Henry Wampole to place before the profession an extract that should retain all the essential principles of the original cod's liver, but without the disagreeable qualities of the oil procured from the same.

As a result there is now before us a specimen of this extract that has been analysed, and is proved to contain the alkaloidal and other medicinal substances that the liver itself had.

The compound extract has, in addition to these products, strychnine, quinine, various hypophosphites, and wild cherry added. The two preparations are pure and useful mixtures, and should enter into the treatment of the many phthisical patients who cannot take the ordinary oil.

Mr. Mark O'Brien, who will be remembered as a most diligent member of the West London Post-Graduate College during the spring and summer courses, has been appointed by the India Office for special plague duty, and is now on his way to India.

NOTES AND NEWS.

THIS number of the JOURNAL being a special one devoted to the description of the British Sanatoria, it has been found necessary, owing to the limitation of space, to hold over much matter which would otherwise have appeared. In making this admission, however, I submit that the members of the Society will nevertheless find that a perusal of the various accounts of the Sanatoria will prove to be interesting, apart from the valuable information which they contain.

THE alterations now being carried out in connection with the enlargement of the Out-patient Department at the West London Hospital are rapidly approaching completion, and it is fully anticipated that the department will shortly again be open for the reception of patients. It cannot be said that much time has been lost since the work was commenced, for it was only in August last that the vandalistic builders' labourers began to hack to pieces the walls of the little compartments within which many a tale of human suffering had been unfolded and many a deed of scientific mercy performed. Again, what changes in the staff those little compartments could have told of had their walls had the power of speech, and how much they would probably have been inclined to say, in a critical sense, concerning the difficulties under which the work was carried on by the staff. But now it may be said that "old times have changed, old manners gone," and with the growing prosperity of the Post-Graduate College, the new walls of the Out-patient rooms will, in the future, have a busy time of it taking notes of all that will be said and done within their masonic hearing.

SOME attention was recently directed in an American medical journal to the professional fees paid to "physicians" in the States, and the curious fact was pointed out that a fee of £100 was quite exceptionally netted. In the land where millionaires abound, as well as men of large wealth, this certainly seems a surprising thing. On the other hand, millionaires in America can, on occasion, satisfy all expectations in this regard. A surgeon not long ago operated successfully for appendicitis in San Francisco, and his millionaire patient voluntarily handed him a draft for £6,000. This fee must eclipse any record which we have of the kind in this country. If anything, however, there are signs everywhere that "operation stock" is showing a falling market. That is to say, the fees for operations are not what they used to be. Many causes, no doubt, are contributing to this doleful state of affairs, but perhaps the most active of all is

the increasing number of those in whose hands the public find that their surgical needs can be safely placed. Thus by competition, combined with efficiency, the operation stock-market is being depressed.

TAKE, for example, the case of adenoids. A veritable slump has occurred in this department during the past few years. When adenoids first came out, the operation value was often quoted at 52½; then there was a drop to 31½; then to 26¼. In the present day the price is generally about 15¾, and when business is dull it may even fall to 10½. Again, with abdominal operations—the proper market price of these stands at 105; at least it ought to stand at that figure, but the amount of fluctuation which takes place in this stock is, as far as I hear, heartrending. The price has been known to drop to 21, quite independently of any international complications with Mr. Oom Paul. As for amputations, now seldom heard of, their price has ceased to be quoted at all. As a matter of fact, it would seem that the more the public are provided with skilled medical assistance the less they will pay for it. The only way, therefore, of saving the situation is to increase the output of millionaires.

THE Cavendish Lodge (No. 2620) continues its prosperous career. At the meeting of the Lodge on June 21 last, Bros. Warham St. Leger, Nash, and Carter Braine were raised to the third degree, and Bros. John W. Ivimy and Frank F. Schacht were passed to the second degree. The ballot then took place for the W.M. for the ensuing year, when Brother J. D. Mortimer, S.W., was unanimously elected to the post. At the same meeting, Brother J. Herbert Menzies was re-elected Treasurer of the Lodge. After the transaction of further business the Lodge adjourned, and the banquet followed, at which several distinguished guests were present.

P. D.

CADBURY'S

COCOA.

"The standard of highest purity"—*The Lancet.*

Entirely free from admixtures, such as Kola, Malt, Hops, &c. No Alkali used to darken the colour.

"When asking for Cocoa insist on having CADBURY'S—sold only in Packets and Tins—as other Cocoas are often substituted for the sake of extra profit.

REPORT FOR THE SESSION, 1898-1899.

Presented by the Council at the 17th Annual Meeting, July, 1899.

YOUR Council has great pleasure in presenting the Report of the Seventeenth Session, and would again congratulate the members on the increasing growth and prosperity of the Society.

The total membership, which at the end of last session was 498, is now 542. During the past Session 64 new members have been elected, three have died, 17 have resigned or have otherwise ceased to be members.

The Society has now, through the kindness of the Authorities of the West London Hospital, the top floor of the New Wing of the Hospital, where there is a spacious meeting room and an anteroom, both well furnished, in which to hold its Meetings and to house its Library.

It is hoped that by a subscription that is now on foot that the resources of the library and therefore the number of works upon its shelves, may be greatly added to.

The Annual Dinner of the Society was again held at the Trocadero Restaurant, on Wednesday, February 8th, 1899, when 108 members and guests were present. This increased number in the attendance would seem to justify the hope expressed in the last Report that holding the Dinner in the winter instead of the summer might lead to a larger assembly.

The Cavendish Lecture was delivered on June 16th, at the Town Hall, Hammersmith, by Prof. William Osler, M.D., LLD., F.R.S., F.R.C.P., of Baltimore, before an audience which exceeded any previous one in the history of the Society.

The President and Council afterwards entertained some 200 of the members and their friends at a Conversazione. Excellent music was provided, including two violin solos kindly rendered by Dr. Arthur Haydon, and in addition there was a large and varied show of exhibits by twenty-nine advertisers in the WEST LONDON MEDICAL JOURNAL.

The finances of the Society continue to be in a state which must be considered as eminently satisfactory, owing to the commendable energy of the Hon. Treasurer. Under the new arrangement a sum of £10 has been paid to the West London Hospital, in return for the use of the Society's rooms for the first six months.

The success of the WEST LONDON MEDICAL JOURNAL during the past year has been such as cannot be gainsaid, and the untiring work of the able Editor has not been the least factor in bringing about this happy result.

Your Council regrets to have to report the loss by death of one of the Hon. Members of the Society, in the person of Sir William Jenner, Bart., G.C.B., LL.D., F.R.S. A vote of condolence was sent to Lady Jenner and her family.

Two other members have also died during the year, viz., Dr. W. H. Causton and Dr. A. Aylmer Orr.

The Council have to report that Dr. William Osler has accepted the Hon. Membership of the Society.

The best thanks of the Society are due to the House Committee of the West London Hospital for their continued interest in the welfare of the Society, and to the Lady Superintendent (Miss Hardy), and to the Secretary-Superintendent (Mr. R. J. Gilbert), for their unvarying courtesy and ever-ready help to the officers of the Society.

The following papers and cases have been brought before the Society at its various meetings:

PAPERS.

PRESIDENTIAL ADDRESS.—Some considerations on the Life and Work of a General Practitioner.

Dr. F. J. McCANN.—Cases illustrating difficulties in the diagnosis of early Tubal Pregnancy.

Dr. A. W. ADDINSELL.—Parotitis following Ovariotomy.

Mr. R. LAKE.—The Treatment of Laryngeal Phthisis.

Mr. J. R. LUNN.—Two Cases of Optic Neuritis associated with Mastoid Disease.

Dr. JAMES ALLAN.—Twelve Tracheotomies for Laryngeal Diphtheria in young children, with nine recoveries.

DISCUSSION ON THE TREATMENT—MEDICAL AND SURGICAL—OF ACUTE INFLAMMATION OF THE VERMIFORM APPENDIX. —Opened by Dr. SEYMOUR TAYLOR and Mr. MCADAM ECCLES, and continued by Dr. DONALD HOOD, Mr. C. B. KEETLEY, Mr. L. A. BIDWELL, Dr. H. A. CALEY, Mr. E. BOYTON, Dr. TOLCHER ECCLES, Mr. J. R. LUNN, and Dr. L. DOBSON.

Dr. S. T. PRUEN.—The Open-air Treatment of Tuberculosis.

Mr. H. J. PATESON.—The use of Gas in General and Dental Surgery.

CASES.

Dr. J. B. BALL.—A Case of Black Tongue.
A Case of Rheumatoid Arthritis in a Boy.

Dr. P. ABRAHAM.—A Case of Psoriasis.
A Case of Lichen Ruber Acuminatus.

Dr. F. H. ALDERSON.—A Case of Recovery following Cirrhosis of the Liver.

Mr. MCADAM ECCLES.—A Tumour of the Sub-maxillary Salivary Gland.
A Tumour of the Parotid Gland.
A Case of Congenital Deficiency of the Upper Extremity.
A Case of Nævoid Condition of the Scrotum and Penis.
A Case of Nævo-lipoma of the Forearm.

Mr. MCADAM ECCLES (for Dr. G. P. SHUTER).—A Survivor from the Faversham Detonator Explosion.

Mr. C. B. KEETLEY.—A Case of Comminuted Fracture of the Olecranon.

Dr. A. WHITFIELD.—A Case of Pityriasis Rubra.

Dr. ANDREW ELLIOT.—A Case of Locomotor Ataxia in a Woman.

Dr. ANDREW ELLIOT (for Dr. SEYMOUR TAYLOR).—A Case of Myxœdema in the Male.

THE PRESIDENT.—A Case of Congenital Deficiency of the Upper Extremity.

Mr. ROWLAND POLLOCK.—Two Cases of Congenital Deformities of the Upper and Lower Extremities.

Mr. BRINDLEY JAMES.—A Case of a Deep Sulcus above and behind the Upper Border of the Manubrium Sterni.

Dr. VAUGHAN PENDRED.—A Case of Partial Recovery from Pseudo-hypertrophic Paralysis.
A Case of commencing Acromegaly.

Dr. L. DOBSON and Mr. C. B. KEETLEY.—A Case of Excision of a Gastric Ulcer.

Mr. L. A. BIDWELL.—A Case of Recovery after Laparotomy for Tuberculous Peritonitis.
A Case of Excision of the Rectum.

Dr. F. H. Low demonstrated many of the Cases above mentioned by means of the Fluorescent Screen, or Skiagrams.

PATHOLOGICAL SPECIMENS.

Dr. JAMES ALLAN.—A Hypertrophied Prepuce from a boy aged nine months.

Dr. C. W. CHAPMAN.—An almost universally adherent Pericardium.
A specimen of extensive Valvular Disease.

Signed on behalf of the Council,

S. D. CLIPPINGDALE, *President.*
W. McADAM ECCLES, } *Hon. Secretaries.*
G. D. ROBINSON, }

STATEMENT OF ACCOUNTS FOR FINANCIAL YEAR ENDING MAY 31st, 1899.

Dr.	£	s.	d.	£	s.	d.
To Balance in hand from last Account				58	15	10½
,, Subscriptions, including arrears, received	118	10	0			
,, Subscriptions paid in advance..	4	0	0			
				122	10	0
,, Subscriptions in arrear, May 31st, 1899	34	0	0			
,, Subscriptions in arrear previous to May 31st, 1898 ..	16	0	0			
				50	0	0
				£231	5	10½

Cr.	£	s.	d.	£	s.	d.
By Grant to West London Medical Journal				25	0	0
,, Printing and Stationery :—						
Messrs. Churchman	22	2	8			
Editorial Secretary, Annual Report	4	10	0			
,, ,, Reprints of Laws	1	5	0			
				27	17	8
,, Postage, &c. :—						
Dr. McCann, Session 97-98	0	7	0			
Mr. McAdam Eccles, 98-99	1	3	4			
Dr. Robinson ,, ,, ...	0	8	0½			
Treasurer, for Stamped Envelopes, 98-99	3	9	5			
Messrs. Churchman ,, ,, ...	13	0	0			
				18	7	9½
,, Refreshments :—						
Grocer	2	17	1			
Milkman	0	10	8			
Baker	0	6	9			
				3	14	6
,, Servants' Wages				3	9	0
,, Hire of Vestry Hall for Cavendish Lecture, 1898 ..				5	5	0
,, West London Hospital, for use of Rooms, 6 months ..				10	0	0
,, Cheque Book				0	2	1
,, Sundries				0	4	4½
				94	0	5
,, Furniture for Rooms, &c. :—						
S. Goff & Co., Carpet	19	10	0			
B. Cohen & Sons, Arm Chairs..	17	2	0			
T. R. Roberts, Ltd., Chairs and Platform	14	8	10			
J. C. Mannell, Bookcases and Screens	18	12	0			
Gayler & Pope, Curtains	1	10	6			
Junior Army and Navy Stores, Clock	1	15	0			
W. Straker, Sundries	0	5	9½			
				73	4	1½
,, Balance at Bank, May 31st, 1899	11	14	8			
,, Cash in hands of Treasurer, May 31st, 1899	2	6	7¾			
				14	1	3¾
,, Arrears of Subscriptions				50	0	0
				£231	5	10½

9th June 1899.

Audited and found correct, (Signed) W. E. C. MUSSON.
F. E. ROCK.

OFFICERS AND COUNCIL.

SESSION, 1899–1900.

President.

DR. J. B. BALL.*

Vice-Presidents.

(HONORARY)
DR. DONALD HOOD.
DR. SYMONS ECCLES.
MR. BRUCE CLARKE.
DR. H. P. POTTER.
DR. S. D. CLIPPINGDALE.

MR. C. M. TUKE.
MR. L. A. BIDWELL.
DR. SEYMOUR TAYLOR.*
MR. NEVILLE WOOD.*

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DR. ANDREW ELLIOT.
DR. F. H. LOW.
DR. J. HARPER.
MR. C. ANDREWS.
DR. F. J. McCANN.
MR. F. R. MALLARD.

MR. F. SAVERY.
DR. L. DOBSON.*
MR. E. BARTLETT.*
DR. D. R. PEARSON.
MR. G. E. TWYNAM.*
MR. H. W. CHAMBERS.*

Treasurer.

MR. T. GUNTON ALDERTON.

Secretaries.

DR. G. D. ROBINSON.
DR. G. P. SHUTER.*

Librarian.

MR. C. B. KEETLEY.

Editor of Journal.

MR. H. PERCY DUNN.

Editorial Secretary of Journal.

MR. McADAM ECCLES.

*Did not hold similar office last year.

PAST PRESIDENTS OF THE SOCIETY.

1882-83. E. HART VINEN, M.D.
1883-84. J. W. L. THUDICHUM, M.D.
1884-85. F. LAWRANCE.
1885-86. W. B. HEMMING.
1886-87. F. H. ALDERSON, M.D.
1887-88. C. R. B. KEETLEY.
1888-89. W. TRAVERS, M.D.
1889-90. H. CAMPBELL POPE, M.D.
1890-91. T. GUNTON ALDERTON.
1891-92. C. WELLS, M.D.
1892-93. F. SWINFORD EDWARDS.
1893-94. DONALD W. C. HOOD, M.D.
1894-95. R. J. BANNING, M.D.
1895-96. A. SYMONS ECCLES, M.B.
1896-97. W. BRUCE CLARKE.
1897-98. H. P. POTTER, M.D.
1898-99. S. D. CLIPPINGDALE, M.D.

CAVENDISH LECTURERS.

1884. TIMOTHY HOLMES.
1885. J. S. BRISTOWE, M.D., F.R.S.
1886. JONATHAN HUTCHINSON, LL.D, F.R.S.
1887. SIR ANDREW CLARKE, BART., M.D., F.R.S.
1888. SIR WILLIAM STOKES, M.D.
1889. JAMES ANDREW, M.D.
1890. ALEXANDER OGSTON, M.D.
1891. T. LAUDER BRUNTON, M.D., F.R.S.
1892. SIR CHARLES CAMERON, M.D.
1893. HENRY MORRIS, M.B.
1894. SIR WILLIAM BROADBENT, BART., M.D.
1895. SIR J. CRICHTON BROWNE, F.R.S.
1896. THOMAS BRYANT.
1897. SIR JOHN WILLIAMS, BART., M.D.
1898. HOWARD MARSH.
1899. WILLIAM OSLER, M.D., LL.D., F.R.S.

LIST OF MEMBERS.

(Corrected to September, 1899.)

Honorary Members.

The Right Hon. Lord LISTER, P.R.S., 12, Park Crescent, W.
Sir JAMES PAGET, Bart., D.C.L., LL.D., F.R.S., 5, Park Square West, N.W.
JONATHAN HUTCHINSON, LL.D., F.R.S., 15, Cavendish Square, W.
His Excellency JOHN DUNCAN, M.D. (of St. Petersburg).
Sir J. BURDON SANDERSON, Bart., M.D., F.R.S., Oxford.
Prof. WILLIAM OSLER, M.D., LL.D., F.R.S., Baltimore, U.S.A.

Honorary Vice-Presidents.

(Not Ex-officio Members of Council.)

J. W. L. THUDICHUM, M.D.
F. LAWRANCE.
F. H. ALDERSON, M.D.
C. B. KEETLEY.
W. TRAVERS, M.D.
H. CAMPBELL POPE, M.D.
T. GUNTON ALDERTON.
F. S. EDWARDS.

Members, September, 1899.*

* The Secretaries request that they may be informed immediately of any inaccuracy in the list or of any change of address.

The abbreviations P., T., V.P., S., C., E.P., A., L., E.J., *and* E.S.J., *are attached to the names of those who have respectively held the offices of President, Treasurer, Vice-President, Secretary, Member of Council, Editor of Proceedings, Auditor, Librarian, Editor of the* JOURNAL, *or Editorial Secretary of the* JOURNAL. *The date before each name signifies the date of election, and the letters* O.M. *signify original member.*

1897	Abel, Horace M. ...	10, King's Bench Walk, Inner Temple, E.C.
1886	Abraham, P. M.D. (V.P., S., C., E.P.) ...	2, Henrietta Street, Cavendish Square, W.
1896	Archard, A. L., M.D. ...	9, Blandford Street, W.
1896	Ackland, R. C.	54, Brook Street, W.
1896	Adams, James, M.D. ...	Springwell, Barnes, S.W.
1892	Addinsell, A. W., M.B. ...	30, Ashburn Place, S.W.
O.M.	Alderson, F. H., M.D. (P., V.P., C.) ...	Glenthorne, Princess Road, W. Bournemouth.
1890	Alderson, F. H., M.B. ...	2, Holland Road, W.
O.M.	Alderton, T. Gunton (P., T., V.P., S., C.) ...	82, The Grove, Hammersmith, W.
1889	Alexander, R. Reid, M.D....	The Asylum, Hanwell.
1897	Allan, James, M.B. ...	49, Harvard Road, Gunnersbury, W.
1898	Allen, L. Lloyd ...	24, Gayton Road, Harrow.
1897	Allingham, Walter ...	32, Hill Street, Rutland Gate, S.W.

1899	Ansaldi, G., M.D. ...	San Remo, Italy.
1884	Anderson, W. M., M.B ...	Norville, Alleyn Park, W. Dulwich, S.E.
1885	Andrews, Charles (A., C.)...	8, Auriol Road, West Kensington, W.
1884	Appleton, T. A. ...	46, Britannia Road, Fulham, S.W.
1897	Armstead, H. W., M.D. ...	58, Chepstow Villas, W.
1898	Armstrong, J. T. ...	109, North End Road, W. Kensington, W.
1897	Arthur, David, M.D. ...	276, Uxbridge Road, W.
1895	Ashe, W. P., M.D. ...	17, Alexander Square, S.W.
1885	Atkinson, T. R., M.D. ...	1, West Cromwell Road, S.W.
1893	Austen, Harold, M.D. ...	6, Devonshire Street, Portland Place, W.
1885	Ayling, Arthur, H. W. ...	Cleveland House, Park Street, Wellington, Salop.
1897	Baines, E., M.C. ...	11, Cranley Place, S.W.
1896	Baker, C. E., M.B. ...	5, Gledhow Gardens, S. Kensington, S.W.
1897	Baker, Oswald	57, Welbeck Street, W.
1891	Baker, W. H.	152, Westbourne Grove, W.
O.M.	Baldock, A., M.B. ...	180, Earl's Court Road, S.W.
1885	Ball, James B. M. D. (P., V.P., C., A.) ...	12, Upper Wimpole Street, W
1883	Ballance, C. A., M.S. ...	106, Harley Street, W.
1898	Banting, Cecil, M. B. ...	57, Campden Hill Road, W.
1888	Barbour, Jas. M., M.B. ...	18, Nevern Road, S.W.
O.M.	Barnes, E. C. (V.P., C., A.)...	194, Hammersmith Road, W.
1899	Barnett, J. E. S. ...	Kenlis, Kingston Hill.
1892	Barrett, A. K.	2, Peel Place, Silver Street, W.
1899	Barrett, A. W., M.B. ...	7, Cavendish Place, W.
1898	Barrett, W. P.	Milford House, Folkestone.
1887	Bartlett, Edward (C.) ...	38, Connaught Square, W.
1899	Barton, Charles N. ...	17, Redcliffe Gardens, S.W.
O.M.	Barton, J. K.	2, Courtfield Road, Gloucester Road, S.W.
1889	Bateman, A. G., M.B. ...	49, Devonshire Street, W.
1897	Bathurst, L. Wood, M.D. ...	35, Colville Terrace, W.
1895	Batten, F. E., M.D. ...	124, Harley Street, W.
1888	Batten, Rayner D., M.D. (C.)	Campden Lodge, Campden Hill Road, W.
1883	Battle, W. H.	49, Harley Street, W.
1898	Beddard, A. P., M.B. ...	44, Seymour Street, W.
O.M.	Benham, R. F.	9, Castletown Road, West Kensington, W.
O.M.	Bennett, C. H., M.D. (A.)	College House, Hammersmith, W.
1894	Benson, G. Vere ...	Tyne House, Lewes, Sussex.
1899	Bevan, Richard	31, Girdler's Road, W. Kensington, W.
1891	Bidwell, L. A.... (V.P., S., C., E.P., E.S.J.) ...	59, Wimpole Street, W.
1896	Bieneman, A. J.,, M.B. ...	64, Shepherd's Bush Green, W.
1898	Bill, Arnold... ...	5, Devonport Street, Hyde Park, W.
O.M.	Bird, W., J.P., D.L. ...	Bute House, Brook Green, Hammersmith, W.
1896	Bishop, T. H., M.B. ...	4, South Parade, Bedford Park, W.
1889	Blacker, A. B., M.D. ...	15, West Eaton Place, S.W.
1898	Blair, C. S., M.D. ...	Fulwood, Kew Gardens.
1885	Blenkinsop, W. H., M.B. (C.)	7, Powis Gardens, Bayswater, W.
1894	Bolton, G. A., M.B. ...	1, Cheniston Gardens, Kensington, W.
1893	Bonney, W. Augustus, M.D.	100, Elm Park Gardens, S.W.
1889	Bontor, S. A., M.D. ...	Great Berkhamsted, Herts.
O.M.	Bott, Henry	Brentford, Middlesex.
1889	Bourke, Wm. H., M.D. ...	8, Moreton Gardens, S.W.
1893	Bourns, N. Whitelaw, M.D.	78, Redcliffe Gardens, South Kensington, S.W.
1899	Box, Stanley, M.B. ...	Avenue Lodge, Ealing, W.
1888	Boyton, E. T. A. ...	46, Sebert Road, Forest Gate, E.

1888	Braga, J. F.	1, Albert Villas, High Road, Chiswick, W.
1898	Bridges, E. C., M.D. ...	Priory Mansions, Drayton Gardens, S.W.
1893	Brinton, R. D., M.D. ...	8, Queen's Gate Terrace, S.W.
1896	Bromet, E., M.B. ...	Mayfels, St. John's, Redhill.
1896	Browne, E.	5, Cavendish Mansions, Langham Street, W.
1890	Bruce, Robt. Marston ...	Western Hospital, Fulham, S.W.
1889	Bruce, S. Noble ...	43, Kensington Gardens Square, W.
1898	Brunton, W. R., M.B. ...	1, St. Stephen's Gardens, East Twickenham.
1898	Bryan, F. Charles, M.D. ...	17, Kensington Gardens Square, W.
1895	Buckland, F. O., M.D. ...	10, Egerton Place, S.W.
1894	Bucknill, C. R.	The Hollies, Rawtenstall, Manchester.
1896	Burrell, A. W., M.D. ...	5, Baker Street, W.
O.M.	Burt, Alfred	143, Uxbridge Road, W.
1897	Butler, C.	53, Devonshire Street, Portland Place, W.
1897	Buttar, C., M.D. ...	10, Kensington Gardens Square, W.
O.M.	Buxton, A. St. C. ...	44, Devonshire Street, W.
1898	Caley, H. A., M.D. ...	24, Upper Berkeley Street, W.
1896	Campbell, H., M.D. ...	23, Wimpole Street, W.
1898	Cardale, Henry J., M.B. ...	The Elms, Harrow Weald.
1892	Carre-Smith, H. L. ...	74, Holland Park Avenue, W.
1896	Cathcart, G. C., M.B. ...	35, Harley Street, W.
1896	Chaldecott, J. H. ...	2, Lancaster Road, Hampstead, N.W.
O.M.	Chapman, C. W., M.D. (C., V.P.)	21, Weymouth Street, W.
1898	Chapman, Vivian ...	1, The Bourne, High Road, Chiswick, W.
1892	Chambers, H. W. (C.) ...	165, Goldhawk Road, W.
1892	Cheatle, G. Lenthal. ..	117, Harley Street, W.
1896	Chittenden, T. H., M.D. ...	32, Ovington Square, S.W.
1884	Clark, T. Marston ...	Cross Deep, Twickenham, Middlesex.
1894	Clark, Ernest, M.D. ...	3, Chandos Street, Cavendish Square, W.
O.M.	Clarke, W. Bruce, M.B. ... (P., C., V.P.)	51, Harley Street, W.
1888	Clemow, Arthur H. W., M.D. (C., S., V.P., L.)	101, Earl's Court Road, W.
O.M.	Clippingdale, S. D., M.D.... (P., V.P., C., E.P., S.)	36, Holland Park Avenue, W.
1897	Coates, G., M.D. ...	30, Brechin Place, S.W.
1889	Coker, O. C.	155, Uxbridge Road, W.
1897	Collier, E. Stansfield ...	33, Westbourne Terrace, W.
1883	Collier, M. P. M., M.S. ...	133, Harley Street, W.
1896	Collier, N. C.	10, West Kensington Gardens, W.
1890	Colman, W. S., M.D. (C)...	22, Wimpole Street, W.
1899	Comber, C. T. T. ...	Pickering, Yorkshire.
O.M.	Cooper, Alfred (T.) ...	9, Henrietta Street, Cavendish Square, W.
1895	Corbould, V. A. L., M.D....	43, Victoria Road, Kensington, W.
1897	Cosens, C.	49, Oxford Terrace, Hyde Park, W.
1885	Cottle, Wyndham, M.D. ...	39, Hertford Street, Mayfair, W.
1898	Coulson, J. E.	St. George's Infirmary, Fulham Road, S.W.
1888	Coutts, J. A., M.B. (C.) ...	54, Upper Berkeley Street, W.
1893	Cox, A. E.	58, High Street, Watford, Herts.
1898	Creasy, L. Eliot ...	35A, Welbeck Street, W.
1885	Crombie, J., M.B. (C.) ...	Sidcup, Kent.
1895	Crookshank, F. G., M.D. ...	Berry Wood, Northampton.
1898	Curtis, Montague W. W....	92, Campden Hill Road, W.
1897	Cutler, L.	1, Kensington Gate, W.
1897	Daniel, R. N.	13, Nevern Square, South Kensington, S.W.
1884	Daniell, D. Hugo ...	53, Campden Hill Square, W.
1898	Darley-Hartley, W., M.D.	41, Grave Street, Cape Town.

1898	Davies, J., M.D.... ...	87, Cambridge Gardens, W.
1897	Davis, H., M.B.... ...	9, Norfolk Crescent, W.
1897	Dawson, S.	2, Fopstone Road, Earl's Court, S.W.
1896	De Castro, G.	79, Davies Street, Berkeley Square, W.
1897	Delahunt, John	2, Sherbrooke Road, Fulham, S.W.
1895	Denne, F. V., M.D. ...	69, Brook Green, W.
1886	Des Vœux, H., M.D. (C.)...	8, James's Street, Buckingham Gate, S.W.
1883	Dickenson, T. V. M.D. ...	33, Sloane Street, S.W.
1895	Dickman, H. G., M.B. ...	Leigh House, The Terrace, Chiswick, W.
1897	Dickson, T. H., M.B. ...	27, Scarsdale Villas, W.
1896	Dickson, W. P.... ...	Coombe Park, Weston, Bath.
1886	Diplock, L. B.	Ashwood, Heathfield Terrace, Chiswick, W.
1896	Dobson, L., M.D. (C.) ...	59, Addison Gardens, West Kensington, W.
1892	Dockrell, Morgan, M.D. ...	9, Cavendish Square, W.
1887	Dodd, H. W.	136, Harley Street, W.
O.M.	Dodsworth, F. C. (C.) ...	Ingledew, Gunnersbury, W.
1898	Don, W. Walton, M.D. ...	466, Edgware Road, W.
O.M.	Doran, Alban (C.) ...	9, Granville Place, W.
O.M.	Drewitt, F. G. D., M.D. ...	2, Manchester Square, W.
1898	Ducat, Arthur D., M.B. ...	Heathfield Gardens, Chiswick, W.
1886	Dudfield, Reginald, M.D....	19, Blomfield Road, Maida Vale, W.
1887	Dudfield, T. Orme, M.D....	Springfield, Kew Gardens Road, Surrey.
1884	Dunn, H. Percy... ... (V.P., S., C., E.P., E.J.)	54, Wimpole Street, W.
1897	Dunn, J. C., M.D. ...	126, Euston Road, N.W.
1897	Dutch, Henry, M.D. ...	8, Berkeley Street, W.
1883	Eccles, A. S., M.B. ... (P., V.P., S., C., E.P.)	23, Hertford Street, W.
1896	Eccles, G. Tolcher, M.B....	63, Sackville Road, Hove, Brighton.
1896	Eccles, H. Annesley, M.D....	Greystoke, Upper Norwood, S.E.
1890	Eccles, Wm. McAdam, M.S. (C., S., E.S.J.)	124, Harley Street, W.
1899	Eccles, W. Soltau ...	140, Church Road, Upper Norwood, S.E.
1893	Eddowes, Alfred, M.D. ...	28, Wimpole Street, W.
1896	Eden, T. W., M.D. ...	49, Queen Anne Street, W.
1898	Edgelow, A. W. ...	Whitstable, Kent.
O.M.	Edwards, F. Swinford ... (P., V.P., C.)	55, Harley Street, W.
1897	Ellacombe, G. W. ...	Bitton Vicarage, near Bristol.
1893	Elliot, Andrew, M.D. (C.)...	11, Upper Berkeley Street, W.
1896	Elliott, H. F.	Sidney House, Sutton Court Road, Chiswick, W.
1896	Elliott, H. Scott... ...	Queen's House, Victoria Road North, Southsea.
1895	English, T. J., M.D. ...	128, Fulham Road, S.W.
1888	Ensor, Edwin Thos., M.D....	162, Ladbroke Grove, W.
1898	Evans, E. W. Spencer ...	56, Highbury Grove, N.
O.M.	Fenton, F. E.	Langstone, Ealing, W.
1897	Féré, E. N., M.D. ...	12, Northampton Square, E.C.
1898	Ferguson, A. S., M.B. ...	34, Canfield Gardens, South Hampstead, N.W.
1897	Ferguson, G. G., M.B. ...	Fern Combe, New West End, N.W.
1893	Fincham, W. S.... ...	53, Kew Bridge Road, Brentford.
1897	Flavelle, J.	Junior Athenæum Club, 116, Piccadilly, W.
1899	Flemyng, George, M.D. ...	10, Colville Houses, Bayswater, W.
1897	Ford, F. C., M.B. ...	47, Ladbroke Square, W.
1899	Foster, M. B.	49, Church Street, Kensington, W.
1888	Fountain, Ed. Osborne, M.D.	1, Arlington Park, Gunnersbury, W.
1886	Fox, Colcott, M.B. ...	14, Harley Street, W.
1896	Freyer, P. J., M.D. ...	46, Harley Street, W.
O.M.	Friend, H. E.	1, St. Stephen's Cresent, Westbourne Park, W.

1897	Galloway, James, M.D. ...	54, Harley Street, W.
1887	Gardner, W. T., M.B. (C.)...	Fairseat, Poole Road, Bournemouth.
1898	Gay, Herbert M., M.B. ...	2, Brabourne Villas, Falconer Road, Bushey.
1898	Gibbes, Cuthbert C., M.D....	83, Barkston Gardens, S.W.
1898	Gibbes, L. N.	1, Gloucester Walk, Kensington, W.
1884	Gillingham, A.	485, High Road, Chiswick.
1886	Gloster, J., M.B. ...	15, Upper Phillimore Place, Kensington, W.
1890	Goldney, A. G. N. ...	18, Brook Green, W.
1886	Goldney, A. C. N. ...	18, Brook Green, W.
1888	Goodsall, D. H.... ...	17, Devonshire Place, W.
1893	Gossage, A. M., M.B. ...	54, Upper Berkeley Street, W.
1894	Gowan, B. C.	Ravendene, Great Stanmore, Middlesex.
1898	Grant, Alfred J., M.D. ...	13, Irving Mansions, Queen's Club Gardens, W. Kensington, W.
1897	Granville, A. G. ...	St. Bartholomew's Hospital, E.C.
1895	Gray, A. C. E., M.B. ...	1, Elm Park Gardens, S.W.
1894	Graydon, A.	73, Talbot Road, W.
1896	Gregory, E. T.	168, Fulham Road, S.W.
1894	Griffin, W. W., M.B. ...	34, Regency Square, Brighton.
1896	Griffiths, A. L., M.D. ...	606, Harrow Road, W.
1888	Griffiths, H. T., M.D. ...	5, Kensington Square, W.
1898	Guthrie, Leonard, M.D. ...	15, Upper Berkeley Street, W.
1898	Haines, Charles H., M.D....	Auckland, New Zealand.
1896	Halley, W.	Park House, Fulham Road, S.W.
1889	Handfield-Jones, M., M.D.	35, Cavendish Square, W.
1895	Handfield-Jones, C. R. ...	103, Earl's Court Road, W.
1885	Harper, Jas., M.D. (C.) ...	25, Rosary Gardens, South Kensington, S.W.
1887	Harris, Carpenter ...	112, Harley Street, W.
1897	Harris, Wilfrid J., M.B. ...	7, Craven Mansions, W.
1896	Harrison, C. J., M.B. ...	36, Cheyne Court, S.W.
O.M.	Harrison, H. F. E. ...	33, Shepherd's Bush Green, W.
1890	Harrison, Reginald ...	6, Lower Berkeley Street, W.
1898	Harrison, R. C.... ...	19, Uxbridge Road, Ealing, W.
1896	Hartley, R., M.D. ...	68, Porchester Terrace, W.
1887	Hartzhorne, B. F. ...	Blenheim Lodge, High Road, Chiswick, W.
1896	Harvey, J. S., M.D. ...	1, Astwood Road, Cromwell Road, S.W.
1899	Haydon, Arthur G., M.D. ..	74, Cotleigh Road, West Hampstead, N.W.
1898	Hayes, Reginald H. ...	4, Courtfield Road, S.W.
1888	Heddy, W. J.	46, Redcliffe Gardens, S.W.
1890	Hill, William, M.D. ...	28, Weymouth Street, W.
1897	Hills, W. C. D.... ...	
1888	Hill-Wilson, Arthur E. ...	217, Goldhawk Road, W.
O.M.	Hogan, J. C., M.D. ...	3, Redcliffe Gardens, South Kensington, S.W.
1896	Hogg, F. Stanley ...	102, Palace Gardens Terrace, W.
1898	Hogg, F. S. D.... ...	The Cedars, Rickmansworth.
O.M.	Hood, D.W.C., M.D. (P., V.P.)	43, Green Street, W.
1898	Holloway, Samuel F. ...	Holmwood, The Avenue, Bedford Park, W.
1898	Hooper, A. Winsmore ...	Station Hospital, Rochester Row, S.W.
1896	Horne, W. Jobson, M.B. ...	27, New Cavendish Street, W.
O.M.	Hubbard, H. W. ...	26, Cornwall Road, W.
1894	Hughes, E. A.	12, Welbeck Street, W.
1885	Humphreys, F. W. ...	24, Sinclair Gardens, West Kensington Park, W.
1893	Hunter, William, M.D. (C.)	103, Harley Street, W.
1887	Hurlbutt, S.	15, Old Burlington Street, W.
1896	Hyde, S., M.D.	Lismore House, Buxton.
1896	Ince, G.	Kensington Dispensary, Church Street, W.
1899	Isaacs, E. P.	1, Sinclair Road, Kensington, W.

1891	Jackson, J. C.	Town Hall, Fulham, S.W.
1896	Jackson, Surg.-Capt., M.D.	Wellington Barracks, S.W.
1895	James, J. Brindley ...	83, Bridge Road, Hammersmith, W.
O.M.	James, W. Culver, M.D. ...	15, Marloes Road, Kensington, W.
1896	Jessop, W. H. M.B. ...	73, Harley Street, W.
1891	John, William	19, Avonmore Road, W.
1894	Johnston, George F., M.D.	3, Montague Place, Montague Square, W.
1898	Jones, H. B., M.B. ...	276, Uxbridge Road, W.
1899	Jones, H. S. Wansborough, M.B.	Poplar Cottage, Harrow.
1887	Jones, Macnaughton, M.D.	141, Harley Street, W.
1886	Juler, H. E.	23, Cavendish Square, W.
1891	Keen, William, M.D. ...	Argyle House, King's Road, Chelsea, S.W.
1896	Keep, A.C., M.D. ...	14, Gloucester Place, W.
O.M.	Keetley, C. B. ... ... (P., V.P., S., C., E.P., L.)	56, Grosvenor Street, W.
1891	Kenwood, H. R., M.B. ...	9, Alexandra Villas, Finsbury Park, N.
1899	Keown, David B. ...	178, Ebury Street, S.W.
1884	Kiallmark, H. W. ...	5, Pembridge Gardens, W.
1897	Kingsford, B. H., M.B. ...	Maybury Road, Woking.
1897	Kirby, W., M.D. ...	Hilden, Sutton Court Road, Chiswick, W.
1896	Kloster, O., M.D. ...	5, St. George's Square, Regent's Park, N.W.
1896	Knight, H.	Eskholme, Shirley, Southampton.
1887	Lake, Richard ... ... (C., S., V.P., E.P.)	19, Harley Street, W.
O.M.	Lamb, W. H., M.B. (C., V.P.)	23, Palace Court, W.
1894	Lancaster, H. F., M.D. ...	154, Westbourne Terrace, W.
1899	Lavies, Harry B., M.B. ...	61, St. George's Road, S.W.
O.M.	Lawrance, F. (P., V.P., C., T.)	360, King Street, Hammersmith, W.
1884	Leeson, Oliver J. ...	Collingham House, Cromwell Road, S.W.
1898	Leslie, R. Murray, M.B. ...	53, Queen Anne Street, W.
1898	Levy, A. G., M.D. ...	124, Baron's Court Road, W.
1893	Lewis, Ernest Wool ...	12, King Street, Hammersmith, W.
1896	Ley, G.	16, York Place, W.
O.M.	Lloyd, R. W. (V.P., S., C., E.P.)	27, Russell Road, Kensington, W.
1892	Lloyd. F. G.	27, Russell Road, Kensington, W.
1896	Lockyer, C. H. J. ...	20, Devonshire Street, W.
1892	Loftus, A. S.	Lindisfarne, Christchurch Road, Boscombe.
1883	Longhurst, A. K. ...	Hughenden, Mount Park Road, Ealing, W.
1896	Low, F. H., M.B. (C.) ...	12, Sinclair Gardens, West Kensington, W.
1895	Low, Harold, M.B. ...	10, Evelyn Gardens, S. Kensington, S.W.
1882	Low, R. Marsden, M.B. (C.)	70, Philbeach Gardens, S.W.
1897	Low, V. Warren, M.D. ...	86, Oxford Terrace, Hyde Park, W.
O.M.	Lunn, J. R. (C.)... ...	St. Marylebone Infirmary, Notting Hill, W.
1888	Lush, Percy J. F., M.B. (A.)	4, Maresfield Gardens, Hampstead, N.W.
1896	Lyle, F. W., M.D. ...	39, The Avenue, Castle Hill, Ealing, W.
1886	Lynch, J. Roch... ...	160, Holland Park Avenue, W.
1890	Lynes, John	6, Argyll Road, Kensington, W.
1898	Lyon, A. Barclay, M.B. ...	165, The Grove, Hammersmith, W.
1896	Lyth, E. R., M.B. ...	117, Goldhawk Road, W.
1894	McCann, F. J., M.D., (S. C.)	5, Curzon Street, W.
1897	McDougal, E. D. ...	Gylen, Weybridge.
O.M.	Mackinlay, J. G. ...	15, Stratford Place, W.
1898	Mackintosh, R. D., M.B ...	The Bungalow, Mortlake, S.W.
1890	MacLaren, J. A., M.B. ...	2, Fairholme Road, W. Kensington, W.
1897	MacLeod, W. A., M.B. ...	9, Pembridge Villas, Bayswater, W.
1897	McNamara, J., M.B. ...	73, Milson Road, West Kensington, W.

1898	Macnaughton, G. W. F., M.D.	436, Fulham Road, S.W.
1896	Maggs, O. H. A. ...	165, Buckingham Palace Road, S.W.
1898	Maidlow, W. H., M.D. ...	Ilminster, Somerset.
1896	Malcolm, J. D., M.B. ...	13, Portman Street, W.
O.M.	Mallam, W. P. (C.) ...	169, Uxbridge Road, W.
1891	Mallard, F. R. (A., C.) ...	23, Bridge Road, Hammersmith, W.
1890	Mansbridge, J. (C.) ...	112, Harley Street. W.
1890	Margrave, M. L. ...	3, Devonia, Newton Abbot, Devon.
1885	Mark, Leonard, M.D. ... (V.P., S., E.P., C., A.)	61, Cambridge Street, Hyde Park, W.
1883	Marsh, Howard	30, Bruton Street, W.
1894	Martin, J. W., M.D. ...	Burnfoot, Cluden, Dumfries, N.B.
1884	Mason, J. W.	1, Osnaburgh Terrace, Regent's Park, N.W.
1884	Mason, J. W. B., M.D. ...	1, Osnaburgh Terrace, Regent's Park, N.W.
1885	Masters, J. A., M.D. (C., V.P.)	15, Half-moon Street, W.
1898	Maunsell, D. F.... ...	67, Earl's Court Road, S.W.
1893	May, C. Gould, M.D. ...	59, Cadogan Place, S.W.
1899	Melville, Stanley ...	7, Kensington Mansions, W.
1887	Mennell, Zebulon ...	1, Royal Crescent, Notting Hill, W.
1894	Menzies, Henry, M.B. ...	4, Ashley Gardens, S.W.
1895	Menzies, J. Herbert ... (V.P., S., C., E.P.)	47, Earl's Court Square, S.W.
1896	Miles, W. E.	
1899	Millard, W. J. Kelson, M.D.	7, Bays Hill, Villas, Cheltenham.
1895	Miller, F. R., M.D. ...	31, Shepherd's Bush Road, W.
O.M.	Miller, J. D., M.B. ...	152, Holland Park Avenue, W.
1893	Mills, H. H.	21, St. Mary Abbott's Terrace, Kensington, W.
1896	Monier-Willians, M.F.S. ...	54, Onslow Gardens, S.W.
1888	Moore, Stephen H. ...	75, Sydney Street, Chelsea, S.W.
1896	Morison, A., M.D. ...	14, Upper Berkeley Street, W.
1896	Morison, H. B., M.B. ...	Parkwood House, Boscombe, Bournemouth.
1893	Morris, E. H. Grant, M.B.	8, Cloucester Terrace, Onslow Gardens, S.W.
1896	Mortimer, J. D., M.D. ...	23, Cheyne Walk, Chelsea, S.W.
1896	Mossman, F. V.... ...	317, Waterloo Road, Manchester.
1896	Moullin, J. A. Mansell, M.D.	69, Wimpole Street, W.
1896	Muggleton, F. C., M.D. ...	St. Helier's, Canonbie Road, Honor Oak, S.E.
1883	Muir, J. C. P.	94, Ladbroke Grove, Notting Hill, W.
1896	Murray, C. Stormont ...	85, Gloucester Place, W.
1897	Mursell, H. Temple, M.B....	33, Weymouth Street, W.
1896	Musson, William C. (A.) ...	61, Bridge Avenue, Hammersmith, W.
1894	Naumann, J. C. F., MD. ...	125, Gower Street, W.C.
1896	Nicoll, T. V.	147, Cromwell Road, S.W.
1887	Noott, W. M.	8, Kensington Park Road, W.
1896	Norman, F., M.D. ...	5, Holland Road, Brixton, S.W.
1896	Oakley, H. C.	37, Chester Terrace, Regent's Park, N.W.
1895	Orr, J. J., M.D.	493, King's Road, Chelsea, S.W.
1882	Orton, G. H. M.D. ...	7, Campden Hill Road, Kensington, W.
1898	Osborn, E, Collett ...	Kensington Infirmary, Marloes Road, W.
1894	Otway, A. Carroll ...	Exeter House, Barnes, S.W.
1887	Owen, Edmund... ...	64, Great Cumberland Place, W.
1882	Owles, J. A., M.D. (V.P.,C.)	Hill View, Woking, Surrey.
1888	Paget, Stephen (C.) ...	70, Harley Street, W.
O.M.	Palmer, F. S., M.D. ...	Compton Lodge, East Sheen, S.W.
1887	Paramore, R., M.D. ...	2, Gordon Square, W.C.
1896	Pardoe, J. G., M.B. ...	6, Lower Berkeley Street, W.
1894	Parker, Charles A. ...	Colne Valley, Rickmansworth.

1890	Parker, W. Turnour ...	68, Lillie Road, Fulham, S.W.
1892	Part, J. Shepley, M.D. ...	c/o Chief Medical Officer, Singapore.
1898	Paterson, H. J., M.B. ...	19, Lower Seymour Street, W.
1897	Paterson, W. B.... ...	7A, Manchester Square, W.
1882	Patmore, Tennyson ...	44, Thornton Avenue, Chiswick, W.
1896	Paton, E. P., M.S. ...	84, Park Street, W.
1889	Pattison, E. S.	Granville House, Fulham Road, S.W.
1886	Pearson, D. Ritchie, M.D. (C.)	23, Upper Phillimore Place, Kensington, W.
1894	Pegler, Louis H., M.D. ...	27, Welbeck Street, W.
1897	Pendred, Vaughan, M.B. ...	Fulham Union Infirmary, Hammersmith, W.
1897	Philps, F. G.	3, The Mansions, Richmond Road, S.W.
O.M.	Pickett, J., M.D. (V.P.,C.)...	26, Colville Square, W.
1894	Pillow, H., M.D. ...	1, Pembridge Gardens, W.
1897	Pitt, F. D.	Wolverton High Road, Chiswick, W.
1883	Pocock, F. E., M.D. ...	The Limes, St. Mark's Road, Notting Hill, W.
1896	Pollock, J. D., M.D. ...	98, Earl's Court Road, S.W.
1898	Pollock, Rowland ...	Penton Lodge, Mill Hill Park, W.
O.M.	Pope, H. Campbell, M.D.... (P., V.P., S., E.P., C.)	280, Goldhawk Road, Shepherd's Bush, W.
1897	Porter, R. I.	90, Edith Road, W.
1896	Potter. E. F., M.D. ...	64, Welbeck Street, W.
O.M.	Potter, H. Percy, M.D. ... (P., V.P., C.)	Kensington Infirmary, W.
1899	Poulter, A. R.	4, Gordon Mansions, W.C.
1899	Prenderville, A. de ...	49, Weymouth Street, W.
1896	Pritchard, O., M.D. ...	37, Southwick Street, Hyde Park, W.
1896	Propert, W. A.	112, Gloucester Place, W.
1898	Pruen, S. T., M.D. ...	Sherborne Lodge, Cheltenham.
1898	Ralph, R. M., M.D. ...	8, Battersea Rise, S.W.
1897	Ramsay, H. M.	35A, Hereford Street, Mayfair, W.
1885	Reece, R. J., M.D. ...	62, Addison Gardens, W.
1883	Reid, John, M.D. ...	31, Bridge Avenue, Hammersmith, W.
1897	Reilly, Major E. W. ...	
1891	Revill, G. L. H. ...	Heighington, Lincoln.
O.M.	Richardson, Gilbert, M.D....	Hillside, Putney Hill, S.W.
1887	Roberts, John D. ...	103, Uxbridge Road, Ealing, W.
1890	Robinson, G. H. D., M.D.... (C., S.)	84, Park Street, Grosvenor Square, W.
1898	Rock, Frank E., M.D. (A.)	Southerton House, Hammersmith, W.
1898	Roe, William F. ...	78, Charlotte Street, Portland Place, W.
O.M.	Rogers, Hildyard ...	43, UxBridge Road, W.
1896	Rooke, E. M.	4, Evelyn Mansions, Westminster, S.W.
1896	Ross, F. W. Forbes, M.D.	15, Gower Street, W.C.
1893	Rotheroe, W. B. ...	47, Gloucester Place, W.
1883	Roughton, E. W., M.D. ...	38, Queen Anne Street, W.
1893	Routh, Amand J. M., M.D.	14A, Manchester Square, W.
1899	Rowe, W. Trethowan ...	St. Bartholomew's Hospital, E.C.
1898	Rudd, W. A., M.D. ...	2, Circus Crescent, Mill Hill Park, W.
1898	Rutherford, Alexander, M.B.	Abbey Road, Barrow-in-Furness.
1897	Ryall, Charles	51, Queen Anne Street, W.
1893	Ryall, E. C.	114, Harley Street, W.
1899	Saunders, E., Arthur, M.B.	77, Lambeth Palace Road, S.E.
1893	Savery, Frank (C.) ...	4, Mount Park Road, Ealing, W.
O.M.	Savill, T. D., M.D. (C.) ...	60, Upper Berkeley Street, W.
O.M.	Schacht, F. F., M.D. ... (V.P., S., L., C.)	168, Earl's Court Road, S.W.
1895	Scharlieb, H. J., M.B. ...	149, Harley Street, W.

1899	Schilling, George ...	18, Clarkville Road, West Kensington, W.
1895	Schofield, S. R., M.B. ...	6, Queen's Club Terrace, West Kensington, W.
1889	Scott, A., M.D.	Bradford Street, Bocking, Essex.
1894	Scott, A. L.	Westbourne Villa, Uxbridge Road, Ealing, W.
1898	Scott, Lindley M., M.D. ...	98, Sloane Street, S.W.
1897	Seccombe, P., M.B. ...	Claygate, Surrey.
1886	Shadwell, H. W. ...	35, Walbrook, E.C.
1894	Shaw, Arthur H. P. ...	Verona House, Tonbridge, Kent.
1898	Shaw-Mackenzie, J. A., M.D.	31, Grosvenor Street, W.
O.M.	Shelden, T., M.D. ...	25, Powis Square, Notting Hill. W.
1896	Shuter, G. P., M.B. (C., S.)	Oaklands, Chiswick Lane, W.
1895	Shuttleworth, G. F., M.D.	Ancaster House, Richmond, Surrey.
1898	Simpson, F. Hampson, M.B.	32, Weymouth Street, W.
1899	Simpson, G. A. Garry ...	Bardon House, East Acton, W.
1898	Sinclair, A. M. Ross, M.B.	231, New King's Road, Parson's Green. S.W.
1899	Sinigar, Harry, M.D. ...	Marylebone Infirmary, Notting Hill, W.
1892	Slevin, P., M.D ...	Fernlea, West Drayton.
1897	Smith, G. C., M.D. ...	5, Inverness Gardens, Kensington, W.
1883	Smith, H. A., M.D. ...	Burnham Lodge, Grange Road, Ealing, W.
1886	Smith, Stanley, M.D. ...	68, Wimpole Street, W.
1886	Smith, Travers R., M.D. ...	13, Kilburn Park Road, N.W.
1896	Snape, E., M.D.... ...	41, Welbeck Street, W.
1897	Snow, H., M.D.... ...	6, Gloucester Place, Portman Square, W.
1898	Spaull, Percy W. ...	1, Stanwick Road, W. Kensington, W.
1890	Spencer, Herbert, M.D. ...	104, Harley Street, W.
1896	Spencer, M. H., M.D. ...	95, St. Mark's Road, N. Kensington, W.
1896	Squire, J. E., M.D. ...	122, Harley Street, W.
1886	Starkie, R. F., M.D. ...	47, Sussex Street, Warwick Square, S.W.
1889	Starling, John	Hornton House, Hornton Street, Kensington, W.
1891	Startin, James	15, Harley Street, Cavendish Square, W.
1896	Staveley, W. H. C. ...	13, South Eaton Place, S.W.
1893	Steele, Russell, M.D. ...	The Red House, Hemel Hempstead, Herts.
1898	Steele, W. Kenneth ...	5, Sheffield Gardens, Kensington, W.
1888	Steer, William (C.) ...	Union Infirmary, Fulham Palace Road, W.
1898	Steegmann, E. J., M.B. ...	1, Grove Park Gardens, Chiswick, W.
1897	Stephen, G. C., M.D. ...	54, Evelyn Gardens, S.W.
1890	Stocker, E. G.	Cotswold House, Cleveden, Somerset.
1896	Stoker, George	14, Hertford Street, Mayfair, W.
1897	Sturge, H. H.	81, Elgin Avenue, W.
1887	Sunderland, Sept., M.D. ...	11, Cavendish Place, W.
1896	Sutherland, G., M.D. ...	9, Old Cavendish Street, W,
1889	Sutherland, H., M.D. (C., V.P.)	21, New Cavendish Street, W.
1896	Swinhoe, G. R.	The Close, New Swindon, Wilts.
1887	Tait, E. S., M.D. ...	48, Highbury Park, N.
1892	Taylor, Alf. Ernest, M.B. ...	26, Lancaster Gate, W.
1892	Taylor, Michael H. ...	16, Church Road, Richmond, Surrey.
1886	Taylor, Seymour, M.D. (V.P., C.) ...	16, Seymour Street, Portman Square, W.
1897	Templeton, G., M.B. ...	8, Mansfield Street, W.
1896	Thompson, G. W. ...	Sunnymeade, Muswell Hill Road, N.
1893	Thompson, Maitland ...	The Marlowes, Hemel Hempstead, Herts.
1897	Thomson, H. Campbell, M.D.	34, Queen Anne Street, W.
1889	Thomson, J. C., M.D. ...	111, Sinclair Road, West Kensington Park, W.
1889	Thornton, B.	Berkeley Lodge, Margate.
O.M.	Thudichum, J. W. L., M.D. (P., V.P., C.)	11, Pembroke Gardens, Kensington, W.
1899	Tilley, Herbert, M.D. ...	101, Harley Street, W.
1887	Times, Lawrence K. ...	23, Manchester Street, W.

1897	Townsend, M. M. ...	15, Queen Street, Hammersmith, W.
O.M.	Travers, W., M.D. (P., V.P., C.) ...	2, Phillimore Gardens, Kensington, W.
1898	Trethowan, William, M.B.	144, Lake Street, Perth, W. Australia.
1894	Trower, Arthur	12, Moreton Gardens, S.W.
1896	Tubby, A.H., M.S. ...	25, Weymouth Street, W.
O.M.	Tuke, C.M., (C., V.P.) ...	Chiswick House, Chiswick, W.
1892	Tuke, T. Seymour, M.B. ...	30, Queen Anne Street, W.
1896	Tunnicliffe, F. W., M.D. ...	6, Devonshire Street, Portland Place, W.
1893	Turnbull, G. L., M.D. ...	76, Ladbroke Grove, W.
1889	Turner, W.A., M.D. ...	13, Queen Anne Street, W.
1897	Twynam, A. E. E. ...	29, Auriol Road, West Kensington, W.
1896	Twynam, G. E. (C.) ...	31, Gledhow Gardens, South Kensington, S.W.
1896	Tyson, W. J., M.D. ...	10, Langhorne Gardens, Folkestone.
1896	Vallencey, A. d'Estampes	1, Theresa Terrace, Ravenscourt Park, W.
1896	Vivian, P.	12, West Kensington Mansions, W.
1891	Vicars, G. Fred., M.D. ...	22, Ovington Gardens, S.W.
1898	Waggett, E. B., M.B. ...	45, Upper Brook Street, W.
1895	Wakefield, R. Clark, M.D.	206, Ladbroke Grove, W.
1896	Walker, A. H., M.B. ...	Thorn Croft, High Road, Chiswick, W.
O.M.	Walker, Horace (C.) ...	143, Hammersmith Road, W.
1889	Wall, Reginald B. ...	72, Bishop's Road, W.
1896	Wallace, F. G., M.B. ..	104, Earl's Court Road, S.W.
1898	Wallace, Joseph B., M.B....	39, Battersea Rise, S.W.
1886	Walsh, David, M.D. ...	9, Bentinck Street, W.
1899	Walter, W. H., M.D. ...	Hambledon Croft, Windmill Road, Brentford.
1896	Walters, F.R., M.D. ...	21, Wimpole Street, W.
1899	Warde, Wilfrid B., M.D. ...	28, Argyll Mansions, Addison Bridge, W.
1897	Waterhouse, H. F. ...	81, Wimpole Street. W.
1897	Watson, J. K., M.D. ...	Byfleet, Surrey.
1892	Watts, Guy, A. T., M.B ...	36, Russell Road, Kensington, W.
1890	Waugh, H. D., M.D. ...	6, Sumner Place, Onslow Square, S.W.
1888	Webb, H.	Wentworth House, Parson's Green, S.W.
1890	Weldon, George, M.B. ...	84, Brompton Road, S.W.
1885	Wells, A. G. (C., V.P.) ...	Keith House, Beaumont Terrace, W. Kensington, W.
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